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Theophrastus

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The Collected Works of
THEOPHRASTUS

(c. 371 – c. 287 BC)



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The Delphi Classics Catalogue



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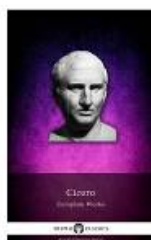
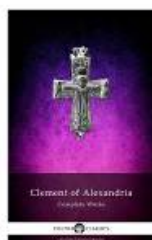
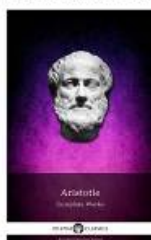
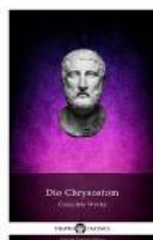
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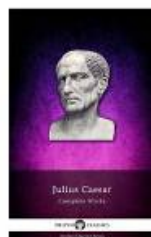
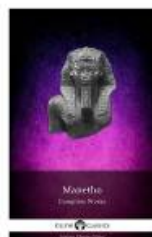
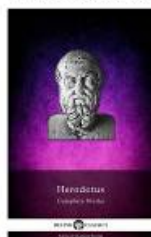
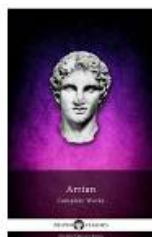
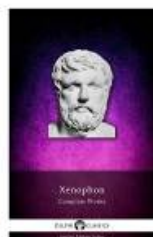
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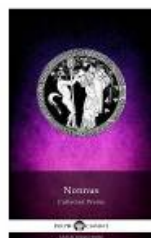
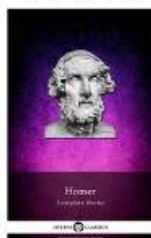
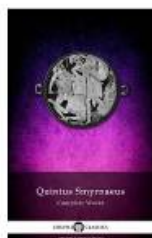
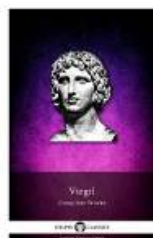
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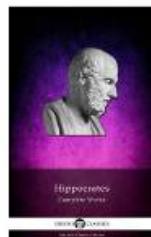
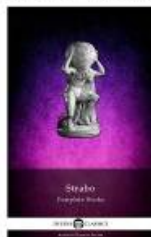
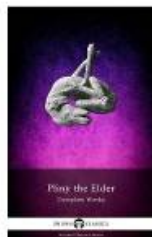
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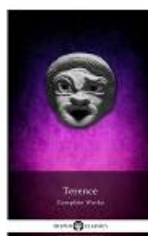
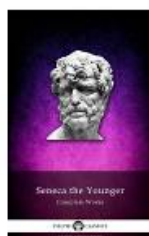
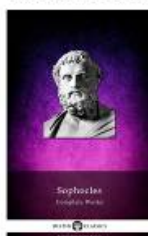
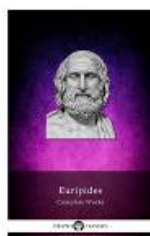
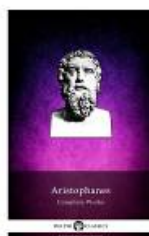
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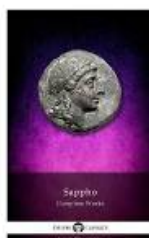
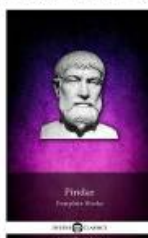
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The Collected Works of
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The Translations



Eresos, a village in Lesbos, Greece — Theophrastus' birthplace

Enquiry into Plants

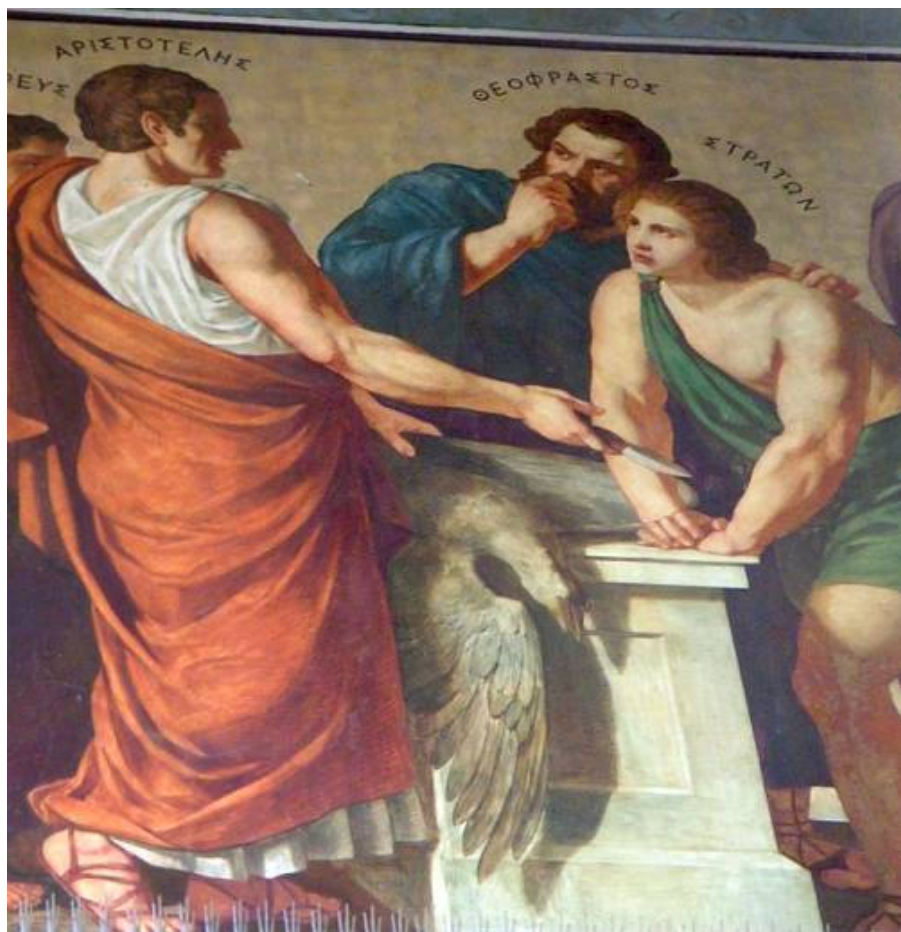


Translated by Arthur F. Hort

Theophrastus' *Enquiry into Plants* is one of the most important books of natural history written in ancient times, which would be an influential work in the Renaissance. The text examines in detail plant structure, reproduction and growth, as well as describing the varieties of plants around the world and their various uses. Book 9, is of particular note, detailing the medicinal uses of plants, offering advice on how to gather and apply them.

Enquiry into Plants was written between c. 350 and c. 287 BC in ten volumes, of which nine survive. The text attempts to construct a biological classification based on how plants reproduce — a first in the history of botany. Theophrastus continually revised the manuscript and so it remained in an unfinished state on his death. The condensed style of the text, with its many lists of examples, indicates that Theophrastus used the manuscript as the working notes for lectures to his students, rather than intending it to be read as a unified work. It is believed that Theophrastus made use of a variety of sources for *Enquiry into Plants*, including Diocles' work on drugs and medicinal plants. In the text, Theophrastus also claims to have gathered information from drug-sellers and root-cutters.

The treatise was first translated into Latin by Theodore Gaza in 1483. Johannes Bodaeus published a frequently cited folio edition in Amsterdam in 1644, complete with commentaries and woodcut illustrations. The first English translation was made by Sir Arthur Hort for the Loeb Classical Series, which was published in 1916.



Aristotle, Theophrastus, and Strato of Lampsacus. Part of a fresco in the portico of the University of Athens painted by Carl Rahl, c. 1888

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Frontispiece to the illustrated 1644 edition of 'Enquiry into Plants'

BOOK I. OF THE PARTS OF PLANTS AND THEIR COMPOSITION.

[1.1] In considering the distinctive characters of plants and their nature generally one must take into account their parts, their qualities, the ways in which their life originates, and the course which it follows in each case: (conduct and activities we do not find in them, as we do in animals). Now the differences in the way in which their life originates, in their qualities and in their life-history are comparatively easy to observe and are simpler, while those shewn in their 'parts' present more complexity. Indeed it has not even been satisfactorily determined what ought and what ought not to be called 'parts,' and some difficulty is involved in making the distinction.

[1.2] Now it appears that by a 'part,' seeing that it is something which belongs to the plant's characteristic nature, we mean something which is permanent either absolutely or when once it has appeared (like those parts of animals which remain for a time undeveloped) — permanent, that is, unless it be lost by disease, age or mutilation. However some of the parts of plants are such that their existence is limited to a year, for instance, flower, 'catkin,' leaf, fruit, in fact all those parts which are antecedent to the fruit or else appear along with it. Also the new shoot itself must be included with these; for trees always make fresh growth every year alike in the parts above ground and in those which pertain to the roots. So that if one sets these down as 'parts,' the number of parts will be indeterminate and constantly changing; if on the other hand these are not to be called 'parts,' the result will be that things which are essential if the plant is to reach its perfection, and which are its conspicuous features, are nevertheless not 'parts'; for any plant always appears to be, as indeed it is, more comely and more perfect when it makes new growth, blooms, and bears fruit. Such, we may say, are the difficulties involved in defining a 'part.'

[1.3] But perhaps we should not expect to find in plants a complete correspondence with animals in regard to those things which concern reproduction any more than in other respects; and so we should reckon as 'parts' even those things to which the plant gives birth, for instance their fruits, although we do not so reckon the unborn young of animals. (However, if such a product seems fairest to the eye, because the plant is then in its

prime, we can draw no inference from this in support of our argument, since even among animals those that are with young are at their best.)

[1.4] Again many plants shed their parts every year, even as stags shed their horns, birds which hibernate their feathers, four-footed beasts their hair: so that it is not strange that the parts of plants should not be permanent, especially as what thus occurs in animals and the shedding of leaves in plants are analogous processes.

[1.5] In like manner the parts concerned with reproduction are not permanent in plants; for even in animals there are things which are separated from the parent when the young is born, and there are other things- which are cleansed away, as though neither of these belonged to the animal's essential nature. And so too it appears to be with the growth of plants; for of course growth leads up to reproduction as the completion of the process.

[1.6] And in general, as we have said, we must not assume that in all respects there is complete correspondence between plants and animals. And that is why the number also of parts is indeterminate; for a plant has the power of growth in all its parts, inasmuch as it has life in all its parts. Wherefore we should assume the truth to be as I have said, not only in regard to the matters now before us, but in view also of those which will come before us presently; for it is waste of time to take great pains to make comparisons where that is impossible, and in so doing we may lose sight also of our proper subject of enquiry. The enquiry into plants, to put it generally, may either take account of the external parts and the form of the plant generally, or else of their internal parts: the latter method corresponds to the study of animals by dissection.

[1.7] Further we must consider which parts belong to all plants alike, which are peculiar to some one kind, and which of those which belong to all alike are themselves alike in all cases; for instance, leaves roots bark. And again, if in some cases analogy ought to be considered (for instance, an analogy presented by animals), we must keep this also in view; and in that case we must of course make the closest resemblances and the most perfectly developed examples our standard; and, finally, the ways in which the parts of plants are affected must be compared to the corresponding effects in the case of animals, so far as one can in any given case find an analogy for comparison. So let these definitions stand.

[1.8] Now the differences in regard to parts, to take a general view, are of

three kinds: either one plant may possess them and another not (for instance, leaves and fruit), or in one plant they may be unlike in appearance or size to those of another, or, thirdly, they may be differently arranged. Now the unlikeness between them is seen in form, colour, closeness of arrangement or its opposite, roughness or its opposite, and the other qualities; and again there are the various differences of flavour. The inequality is seen in excess or defect as to number or size, or, to speak generally, all the above-mentioned differences too are included under excess and defect: for the 'more' and the 'less' are the same thing as excess and defect, whereas 'differently arranged' implies a difference of position; for instance, the fruit may be above or below the leaves, and, as to position on the tree itself, the fruit may grow on the apex of it or on the side branches, and in some cases even on the trunk, as in the sycamore; while some plants again even bear their fruit underground, for instance arakhidna and the plant called in Egypt uingon; again in some plants the fruit has a stalk, in some it has none. There is a like difference in the floral organs: in some cases they actually surround the fruit, in others they are differently placed: in fact it is in regard to the fruit, the leaves, and the shoots that the question of position has to be considered.

[1.9] Or again there are differences as to symmetry: in some cases the arrangement is irregular, while the branches of the silver-fir are arranged opposite one another; and in some cases the branches are at equal distances apart, and correspond in number, as where they are in three rows.

[1.10] Wherefore the differences between plants must be observed in these particulars, since taken together they shew forth the general character of each plant.

[1.11] But, before we attempt to speak about each, we must make a list of the parts themselves. Now the primary and most important parts, which are also common to most, are these — root, stem, branch, twig; these are the parts into which we might divide the plant, regarding them as members, corresponding to the members of animals: for each of these is distinct in character from the rest, and together they make up the whole.

[1.12] The root is that by which the plant draws its nourishment, the stem that to which it is conducted. And by the 'stem' I mean that part which grows above ground and is single; for that is the part which occurs most generally both in annuals and in long-lived plants; and in the case of trees it is called the

‘trunk.’ By ‘branches’ I mean the parts which split off from the stem and are called by some ‘boughs.’- By ‘twig’ I mean the growth which springs from the branch regarded as a single whole, and especially such an annual growth.

[1.13] Now these parts belong more particularly to trees. The stem however, as has been said, is more general, though not all plants possess even this, for instance, some herbaceous plants are stemless; others again have it, not permanently, but as an annual growth, including some whose roots live beyond the year. In fact your plant is a thing various and manifold, and so it is difficult to describe in general terms: in proof whereof we have the fact that we cannot here seize on any universal character which is common to all, as a mouth and a stomach are common to all animals; whereas in plants some characters are the same in all, merely in the sense that all have analogous characters, while others correspond otherwise. For not all plants have root, stem, branch, twig, leaf, flower or fruit, or again bark, core, fibres or veins; for instance, fungi and truffles; and yet these and such like characters belong to a plant’s essential nature. However, as has been said, these characters belong especially to trees, and our classification of characters belongs more particularly to these; and it is right to make these the standard in treating of the others.

[1.14] Trees moreover shew forth fairly well the other features also which distinguish plants; for they exhibit differences in the number or fewness of these which they possess, as to the closeness or openness of their growth, as to their being single or divided, and in other like respects. Moreover each of the characters mentioned is not ‘composed of like parts’; by which I mean that though any given part of the root or trunk is composed of the same elements as the whole, yet the part so taken is not itself called ‘trunk,’ but ‘a portion of a trunk.’ The case is the same with the members of an animal’s body; to wit, any part of the leg or arm is composed of the same elements as the whole, yet it does not bear the same name (as it does in the case of flesh or bone); it has no special name. Nor again have subdivisions of any of those other organic parts which are uniform special names, subdivisions of all such being nameless. But the subdivisions of those parts which are compound have names, as have those of the foot, hand, and head, for instance, toe, finger, nose or eye. Such then are the largest parts of the plant.

[2.1] Again there are the things of which such parts are composed, namely

bark, wood, and core (in the case of those plants which have it), and these are all 'composed of like parts.' Further there are the things which are even prior to these, from which they are derived — sap, fibre, veins, flesh: for these are elementary substances — unless one should prefer to call them the active principles of the elements; and they are common to all the parts of the plant. Thus the essence and entire material of plants consist in these.

[2.2] Again there are other as it were annual parts, which help towards the production of the fruit, as leaf, flower, stalk (that is, the part by which the leaf and the fruit are attached to the plant) - and again tendril, 'catkin' (in those plants that have them). And in all cases there is the seed which belongs to the fruit: by 'fruit' is meant the seed or seeds,' together with the seed-vessel. Besides these there are in some cases peculiar parts, such as the gall in the oak, or the tendril in the vine.

[2.3] In the case of trees we may thus distinguish the annual parts, while it is plain that in annual plants all the parts are annual: for the end of their being is attained when the fruit is produced. And with those plants which bear fruit annually, those which take two years (such as celery and certain others) and those which have fruit on them for a longer time — with all these the stem will correspond to the plant's length of life: for plants develop a stem at whatever time they are about to bear seed, seeing that the stem exists for the sake of the seed.

[2.4] Let this suffice for the definition of these parts: and now we must endeavour to say what each of the parts just mentioned is, giving a general and typical description.

[2.5] The sap is obvious: some call it simply in all cases 'juice,' as does Menestor among others: others, in the case of some plants give it no special name, while in some they call it 'juice,' and in others 'gum.' Fibre and 'veins' have no special names in relation to plants, but, because of the resemblance, borrow the names of the corresponding parts of animals. — It may be however that, not only these things, but the world of plants generally, exhibits also other differences as compared with animals: for, as we have said,² the world of plants is manifold. However, since it is by the help of the better known that we must pursue the unknown, and better known are the things which are larger and plainer to our senses, it is clear that it is right to speak of these things in the way indicated: for then in dealing with the less known

things we shall be making these better known things our standard, and shall ask how far and in what manner comparison is possible in each case. And when we have taken the parts, we must next take the differences which they exhibit, for thus will their essential nature become plain, and at the same time the general differences between one kind of plant and another.

[2.6] Now the nature of the most important parts has been indicated already, that is, such parts as the root, the stem, and the rest: their functions and the reasons for which each of them exists will be set forth presently. For we must endeavour to state of what these, as well as the rest, are composed, starting from their elementary constituents.

[2.7] First come moisture and warmth: for every plant, like every animal, has a certain amount of moisture and warmth which essentially belong to it; and, if these fall short, age and decay, while, if they fail altogether, death and withering ensue. Now in most plants the moisture has no special name, but in some it has such a name, as has been said -: and this also holds good of animals: for it is only the moisture of those which have blood which has received a name; wherefore we distinguish animals by the presence or absence of blood, calling some 'animals with blood,' others 'bloodless.' Moisture then is one essential 'part,' and so is warmth, which is closely connected with it.

[2.8] There are also other internal characters, which in themselves have no special name, but, because of their resemblance, have names analogous to those of the parts of animals. Thus plants have what corresponds to muscle; and this quasi-muscle is continuous, fissile, long: moreover no other growth starts from it either branching from the side or in continuation of it. Again plants have veins: these in other respects resemble the 'muscle,' but they are longer and thicker, and have side-growths and contain moisture. Then there are wood and flesh: for some plants have flesh, some wood. Wood is fissile, while flesh can be broken up in any direction, like earth and things made of earth: it is intermediate between fibre and veins, its nature being clearly seen especially in the outer covering' of seed-vessels. Bark and core are properly so called, yet they too must be defined. Bark then is the outside, and is separable from the substance which it covers. Core is that which forms the middle of the wood, being third in order from the bark, and corresponding to the marrow in bones. Some call this part the 'heart,' others call it 'heart-

wood': some again call only the inner part of the core itself the 'heart,' while others distinguish this as the 'marrow.'

[2.9] Here then we have a fairly complete list of the 'parts,' and those last named are composed of the first 'parts'; wood is made of fibre and sap, and in some cases of flesh also; for the flesh hardens and turns to wood, for instance in palms ferula and in other plants in which a turning to wood takes place, as in the roots of radishes. Core is made of moisture and flesh: bark in some cases of all three constituents, as in the oak black poplar and pear; while the bark of the vine is made of sap and fibre, and that of the cork-oak of flesh and sap. Moreover out of these constituents are made the most important parts,- those which mentioned first, and which may be called 'members': however not all of them are made of the same constituents, nor in the same proportion, but the constituents are combined in various ways.

[2.10] Having now, we may say, taken all the parts, we must endeavour to give the differences between them and the essential characters of trees and plants taken as wholes.

[3.1] Now since our study becomes more illuminating if we distinguish different kinds, it is well to follow this plan where it is possible. The first and most important classes, those which comprise all or nearly all plants, are tree, shrub, under-shrub, herb.

[3.2] A tree is a thing which springs from the root with a single stem, having knots and several branches, and it cannot easily be uprooted; for instance, olive fig vine. 'A shrub is a thing which rises from the root with many branches; for instance, bramble Christ's thorn. An under-shrub is a thing which rises from the root with many stems as well as many branches; for instance, savory-rue. A herb is a thing which comes up from the root with its leaves and has no main stem, and the seed is borne on the stem; for instance, corn and pot-herbs.

[3.3] These definitions however must be taken and accepted as applying generally and on the whole. For in the case of some plants it might seem that our definitions overlap; and some under cultivation appear to become different and depart from their essential nature, for instance, mallow when it grows tall and becomes tree-like. For this comes to pass in no long time, not more than six or seven months, so that in length and thickness the plant becomes as great as a spear, and men accordingly use it as a walking-stick,

and after a longer period the result of cultivation is proportionately greater. So too is it with the beets; they also increase in stature under cultivation, and so still more do chaste-tree Christ's thorn ivy, so that, as is generally admitted, these become trees, and yet they belong to the class of shrubs. On the other hand the myrtle, unless it is pruned, turns into a shrub, and so does filbert: indeed this last appears to bear better and more abundant fruit, if one leaves a good many of its branches untouched, since it is by nature like a shrub. Again neither the apple nor the pomegranate nor the pear would seem to be a tree of a single stem, nor indeed any of the trees which have side stems from the roots, but they acquire the character of a tree when the other stems are removed. However some trees men even leave with their numerous stems because of their slenderness, for instance, the pomegranate and the apple, and they leave the stems of the olive and the fig cut short. Indeed it might be suggested that we should classify in some cases simply by size, and in some cases by comparative robustness or length of life. For of under-shrubs and those of the pot-herb class some have only one stem and come as it were to have the character of a tree, such as cabbaore and rue: wherefore some call these 'tree-herbs'; and in fact all or most of the pot-herb class, when they have been long in the ground, acquire a sort of branches, and the whole plant comes to have a tree-like shape, though it is shorter lived than a tree.

[3.4] For these reasons then, as we are saying, one must not make a too precise definition; we should make our definitions typical. For we must make our distinctions too on the same principle, as those between wild and cultivated plants, fruitbearing and fruitless, flowering and flowerless, evergreen and deciduous. Thus the distinction between wild and cultivated seems to be due simply to cultivation, since, as Hippon remarks, any plant may be either wild or cultivated according as it receives or does not receive attention.

[3.5] Again the distinctions between fruitless and fruitbearing, flowering and flowerless, seem to be due to position and the climate of the district. And so too with the distinction between deciduous and evergreen, thus they say that in the district of Elephantine neither vines nor figs lose their leaves.

[3.6] Nevertheless we are bound to use such distinctions. For there is a certain common character alike in trees, shrubs, under-shrubs, and herbs. Wherefore, when one mentions the causes also, one must take account of all

alike, not giving separate definitions for each class, it being reasonable to suppose that the causes too are common to all. And in fact there seems to be some natural difference from the first in the case of wild and cultivated, seeing that some plants cannot live under the conditions of those grown in cultivated ground, and do not submit to cultivation at all, but deteriorate under it; for instance, silver-fir, fir, holly, and in general those which affect cold snowy country; and the same is also true of some of the under-shrubs and herbs, such as caper and lupin. Now in using the terms 'cultivated' and 'wild' we must make these on the one hand our standard, and on the other that which is in the truest sense 'cultivated.' Now Man, if he is not the only thing to which this name is strictly appropriate, is at least that to which it most applies.

[4.1] Again the differences, both between the plants' wholes and between their parts, may be seen in the appearance itself of the plant. I mean differences such as those in size, hardness, smoothness or their opposites, as seen in bark, leaves, and the other parts; also, in general, differences as to comeliness or its opposite and as to the production of good or of inferior fruit. For the wild kinds appear to bear more fruit, for instance, the wild pear and wild olive, but the cultivated plants better fruit, having even flavours which are sweeter and pleasanter and in general better blended, if one may so say.

[4.2] These then as has been said, are differences of natural character, as it were, and still more so are those between fruitless and fruitful, deciduous and evergreen plants, and the like. But with all the differences in all these cases we must take into account the locality,² and indeed it is hardly possible to do otherwise. Such differences would seem to give us a kind of division into classes, for instance, between that of aquatic plants and that of plants of the dry land, corresponding to the division which we make in the case of animals. For there are some plants which cannot live except in wet; and again these are distinguished from one another by their fondness for different kinds of wetness; so that some grow in marshes, others in lakes, others in rivers, others even in the sea, smaller ones in our own sea, larger ones in the Red Sea. Some again, one may say, are lovers of very wet places, or plants of the marshes, such as the willow and the plane. Others again cannot live at all in water, but seek out dry places; and of the smaller sorts there are some that prefer the shore.

[4.3] However, if one should wish to be precise, one would find — that even

of these some are impartial and as it were amphibious, such as tamarisk, willow, alder, and that others even of those which are admitted to be plants of the dry land sometimes live in the sea, as palm, squill, asphodel. But to consider all these exceptions and, in general, to consider in such a manner is not the right way to proceed. For in such matters too nature certainly does not thus go by any hard and fast law. Our distinctions therefore and the study of plants in general must be understood accordingly. To return — these plants as well as all others will be found to differ, as has been said, both in the shape of the whole and in the differences between the parts, either as to Jiaving or not having certain parts, or as to having a greater or less number of parts, or as to having them differently arranged, or because of other differences such as we have already mentioned. And it is perhaps also proper to take into account the situation in which each plant naturally grows or does not grow. For this is an important distinction, and specially characteristic of plants, because they are united to the ground and not free from it like animals.

[5.1] Next we must try to give the differences as to particular parts, in the first instance speaking broadly of those of a general character, and then of special differences between individual kinds; and after that we must take a wider range, making as it were a fresh survey.

[5.2] Some plants grow straight up and have tall stems, as silver-fir, fir, cypress; some are by comparison crooked and have short stems, as willow, fig, pomegranate; and there are like differences as to degree of thickness. Again some have a single stem, others many stems; and this difference corresponds — more or less to that between those which have sidegrowths and those which have none, or that between those which have many branches and those which have few, such as the date-palm. And in these very instances we have also differences in strength thickness and the like. Again some have thin bark, such as bay and lime; others have a thick bark, such as the oak. And again some have smooth bark, as apple and fig; others rough bark, as ‘wild oak’ (Valonia oak) cork-oak and date-palm. However all plants when young have smoother bark, which gets rougher as they get older; and some have cracked bark, as the vine; and in some cases it readily drops off, as in andrachne, apple, and arbutus. And again of some the bark is fleshy, as in cork-oak, oak, poplar; while in others it is fibrous and not fleshy; and this applies alike to trees shrubs and annual plants, for instance to vines, reeds and

wheat. Again in some the bark has more than one layer, as in lime, silver-fir, vine, Spanish broom, onions; while in some it consists of only as that of the silver-fir, while others are rather breakable, such as the wood of the olive. Again some are without knots, — as the stems of elder, others have knots, as those of fir and silver-fir.

[5.3] Now such differences also must be ascribed to the essential character of the plant: for the reason why the wood of silver-fir is easily split is that the grain is straight, while the reason why olive-wood is easily broken is that it is crooked and hard. Limewood and some other Moods on the other hand are easily bent because their sap is viscid. Boxwood and ebony are heavy because the grain is close, and oak because it contains mineral matter. In like manner the other peculiarities too can in some way be referred to the essential character.

[6.1] Again there are differences in the 'core': in the first place according as plants have any or have none, as some say is the case with elder among other things; and in the second place there are differences between those which have it, since in different plants it is respectively fleshy, woody, or membranous; fleshy, as in vine, fig, apple, pomegranate, elder, ferula; woody, as in Aleppo pine, silver-fir, fir; in the lastnamed especially so, because it is resinous.- Harder again and closer than these is the core of dog-wood kermes-oak, oak, laburnum, mulberry, ebony, nettletree.

[6.2] The cores in themselves also differ in colour; for that of ebony and oak is black, and in fact in the oak it is called 'oak-black'; and in all these the core is harder and more brittle than the ordinary wood; and for this reason the core of these trees can not be bent. Again the core differs in closeness of texture. A membranous core is not common in trees, if indeed it is found at all; but it is found in shrubby plants and woody plants generally, as in reed ferula and the like. Again in some the core is large and conspicuous, as in kermes-oak, oak and the other trees mentioned above; while in others it is less conspicuous, as in olive and box. For in these trees one cannot find it isolated, but, as some say, it is not found in the middle of the stem, being diffused throughout, so that it has no separate place; and for this reason some trees might be thought to have no core at all; in fact in the date-palm the wood is alike throughout.

[6.3] Again plants differ in their roots, some having many long roots, as fig

oak plane; for the roots of these, if they have room, run to any length. Others again have few roots, as pomegranate and apple, others a single root, as silver-fir and fir; these have a single root in the sense that they have one long one which runs deep, and a number of small ones branching from this. Even in some of those which have more than a single root the middle root is the largest and goes deep, for instance, in the almond; in the olive this central root is small, while the others are larger and, as it were, spread out crabwise. Again the roots of some are mostly stout, of some of various degrees of stoutness, as those of bay and olive; and of some they are all slender, as those of the vine. Roots also differ in degree of smoothness and in density. For the roots of all plants are less dense than the parts above ground, but the density varies in different kinds, as also does the woodiness. Some are fibrous, as those of the silver-fir, some fleshier, as those of the oak, some are as it were branched and tassel-like, as those of the olive; and this is because they have a large number of fine small roots close together; for all in fact produce these from their large roots, but they are not so closely matted nor so numerous in some cases as in others.

[6.4] Again some plants are deeprooting, as the oak, and some have surface roots, as olive, pomegranate, apple, cypress. Again some roots are straight and uniform, others crooked and crossing one another. For this comes to pass not merely on account of the situation because they cannot find a straight course; it may also belong to the natural character of the plant, as in the bay and the olive; while the fig and such like become crooked because they can not find a straight course.

[6.5] All roots have core, just as the stems and branches do, which is to be expected, as all these parts are made of the same materials. Some roots again have side-growths shooting upwards, as those of the vine find pomegranate, while some have no side-growth, as those of silver-fir, cypress and fir. The same differences are found in under-shrubs and herbaceous plants and the rest, except that some have no roots at all, as truffle, mushroom, bullfist 'thunder-truffle.' Others have numerous roots, as wheat, one-seeded wheat, barley and all plants of like nature, for instance, - Some have few roots, as leguminous plants. And in general most of the potherbs have single roots, as cabbage, beet, celery, monk's rhubarb; but some have large side-roots, as celery and beet, and in proportion to their size these root deeper than trees. Again of

some the roots are fleshy, as in radish, turnip, cuckoo-pint, crocus; of some they are woody, as in rocket and basil. And so with most wild plants, except those whose roots are to start with numerous and much divided, as those of wheat barley and the plant specially called 'grass.' For in annual and herbaceous plants this is the difference between the roots: — Some are more numerous and uniform and much divided to start with, but the others have one or two specially large roots and others springing from them.

[6.6] To speak generally, the differences in roots are more numerous in shrubby plants and pot-herbs; — for some are woody, as those of basil, some fleshy, as those of beet, and still more those of cuckoo-pint asphodel and crocus; some again are made, as it were, of bark and flesh, as those of radishes and turnips; some have joints, as those of reeds and dog's tooth grass and of am-thing of a reedy character; and these roots alone, or more than any others, resemble the parts above ground; they are in fact like reeds fastened in the ground by their fine roots. Some again have scales or a kind of bark, as those of squill and purse-tassels, and also of onion and things like these. In all these it is possible to strip oft a coat.

[6.7] Now all such plants, seem, as it were, to have two kinds of root; and so, in the opinion of some, this is true generally of all plants which have a solid 'head' and send out roots from it downwards. These have, that is to say this fleshy or bark-like root. The squill, as well as the roots which grow from this. For these roots not only differ in degree of stoutness, like those of trees and pot-herbs; they are of quite distinct classes. This is at once quite evident in cuckoo-pint and galingale, the root being in the one case thick smooth and fleshy, in the other thin and fibrous. Wherefore we might question if such roots should be called roots ' ; inasmuch as they are under ground they would seem to be roots, but, inasmuch as they are of opposite character to other roots, they Mould not. For your root gets slenderer as it gets longer and tapers continuously to a point; but the so-called root of squill purse-tassels and cuckoo-pint does just the opposite.

[6.8] Again, while the others send out roots at the sides, this is not the case with squill and pursetassels, nor yet with garlic and onion. In general in these plants the roots which are attached to the 'head' in the middle appear to be real roots and receive nourishment,' and this 'head' is, as it were, an embryo or fruit; Therefore those who call such plants 'plants which reproduce

themselves underground' give a fair account of them. In other kinds of plants there is nothing of this sort. But a difficult question is raised, since here the 'root' has a character which goes beyond what one associates with roots. For it is not right to call all that which is underground 'root,' since in that case the stalk of purse-tassels and that of long onion and in general any part which is underground would be a root, and so would the truffle, the plant which some call puff-ball, the uingon, and all other underground plants. Whereas none of these is a root; for we must base our definition on natural function and not on position.

[6.9] However it may be that this is a true account and yet that such things are roots no less; but in that case we distinguish two different kinds of root, one being of this character and the other of the other, and the one getting its nourishment from the other; though the fleshy roots too themselves seem to draw nourishment. At all events men invert the roots of cuckoo-pint before it shoots, and so they become larger by being prevented from pushing through to make a shoot. For it is evident that the nature of all such plants is to turn downwards for choice; for the stems and the upper parts generally are short and weak, while the underground parts are large numerous and strong, and that, not only in the instances given, but in reeds dog's-tooth grass and in general in all plants of a reedy character and those like them. Those too which resemble ferula have large fleshy roots.

[6.10] Many herbaceous plants likewise have such roots, as colchicum crocus and the plant called 'partridge-plant'; for this too has thick roots which are more numerous than its leaves. (It is called the 'partridge-plant' because partridges roll in it and grub it up.) So too with the plant called in Egypt uingon; for its leaves are large- and its shoots short, while the root is long and is, as it were, the fruit. It is an excellent thing and is eaten; men gather it when the river goes down by turning the clods. But the plants which afford the most conspicuous instances and shew the greatest difference as compared with others are silphium and the plant called magydaris; the character of both of these and of all such plants is especially shewn in their roots. Such is the account to be given of these plants.

[6.11] Again some roots would seem to shew a greater difference than those mentioned, for instance, those of arakhidna, and of a plant which resembles arakos. For both of these bear a fruit underground which is as large as the fruit

above ground, and this arakos has one thick root, namely, the one which runs deep, while the others which bear the 'fruit' are slenderer and branch in many directions at the tip. It is specially fond of sandy ground. Neither of these plants has a leaf nor anything resembling a leaf, but they bear, as it were, two kinds of fruit instead, which seems surprising. So many then are the differences shewn in the characters and functions of roots.

[7.1] The roots of all plants seem to grow earlier than the parts above ground (for growth does take place downwards). But no root goes down further than the sun reaches, since it is the heat which induces growth. Nevertheless the nature of the sod, if it is light open and porous, contributes greatly to deep rooting, and still more to the formation of long roots; for in such soils growth goes further and is more vigorous. This is evident in cultivated plants. For, provided that they have water, they run on, one may say, wherever it may be, whenever the ground is unoccupied and there is no obstacle. For instance the plane-tree by the watercourse in the Lyceum when it was still young sent out its roots a distance of thirty-three cubits, having both room and nourishment.

[7.2] The fig would seem, one may say, to have the longest roots, and in general plants which have wood of loose texture and straight roots would seem to have these longer. Also young plants, provided that they have reached their prime, root deeper and have longer roots than old ones; for the roots decay along with the rest of the plant's body. And in all cases alike the juices of plants are more powerful in the roots than in other parts, while in some cases they are extremely powerful; wherefore the roots are bitter in some plants whose fruits are sweet; some roots again are medicinal, and some are fragrant, as those of the iris.

[7.3] The character and function of the roots of the 'Indian fig' (banyan) are peculiar, for this plant sends out roots from the shoots till it has a hold on the ground and roots again; and so there comes to be a continuous circle of roots round the tree, not connected with the main stem but at a distance from it.

[7.4] Something similar to this, but even more surprising, occurs in those plants which emit roots from their leaves, as they say does a certain herb — which grows about Opus, which is also sweet to taste. The peculiarity again of lupins is less surprising, namely that, if the seed is dropped where the ground is thickly overgrown, it pushes its root through to the earth and germinates because of its vigour. But we have said enough for study of the differences

between roots.

[8.1] One may take it that the following are the differences between trees: — Some have knots, more or less, others are more or less without them, whether from their natural character or because of their position. But, when I say ‘without knots,’ I do not mean that they have no knots at all (there is no tree like that, but, if it is true of any plants, it is only of other kinds, such as rush bulrush galingale and plants of the lake side generally) but that they have few knots. Now this is the natural character of elder bay fig and all smooth-barked trees, and in general of those whose wood is hollow or of a loose texture. Olive fir and wild olive have knots; and some of these grow in thickly shaded windless and wet places, some in sunny positions exposed to storms and winds, where the soil is light and dry; for the number of knots varies between trees of the same kind. And in general mountain trees have more knots than those of the plain, and those that grow in dry spots than those that grow in marshes.

[8.2] Again the way in which they are planted makes a difference in this respect; those trees that grow close together are knotless and erect, those that grow far apart have more knots and a more crooked growth; for it happens that the one class are in shade, the others in full sun. Again the ‘male’ trees have more knots than the ‘female’ in those trees in which both forms are found, as cypress, silver-fir, hop-hornbeam, cornelian cherry — for there is a kind called ‘female cornelian cherry’ (cornel) — and wild trees have more knots than trees in cultivation: this is true both in general and when we compare those of the same kind, as the wild and cultivated forms of olive fig and pear. All these have more knots in the wild state; and in general those of closer growth have this character more than those of open growth; for in fact the ‘male’ plants are of closer growth, and so are the wild ones; except that in some cases, as in box and nettle-tree, owing to the closer growth there are no knots at all, or only a few.

[8.3] Again the knots of some trees are irregular and set at haphazard, while those of others are regular, alike in their distance apart and in their number, as has been said; wherefore also they are called trees with regular knots.’ For of some the knots are, i\s it were, at even distances, while in others the distance between them is greater at the thick end of the stem. And this proportion holds throughout. This is especially evident in the wild olive and in reeds — in

which the joint corresponds to the knot in trees. Again some knots are opposite one another, as those of the wild olive, while others are set at random. Again some trees have double knots, some treble, some more at the same point; some have as many as five. — In the silver-fir both the knots and the smaller branches are set at right angles, as if they were stuck in, but in other trees they are not so. And that is why the silver-fir is such a strong tree. Most peculiar are the knots of the apple, for they are like the faces of wild animals; there is one large knot, and a number of small ones round it. Again some knots are blind, others productive; by ‘blind’ I mean those from which there is no growth. These come to be so either by nature or by mutilation, according as either the knot’ is not free and so the shoot does not make its way out, or, a bough having been cut off, the place is mutilated, for example by burning. Such knots occur more commonly in the thicker boughs, and in some cases in the stem also. And in general, wherever one chops or cuts part of the stem or bough, a knot is formed, as though one thing were made thereby into two and a fresh growing point produced, the cause being the mutilation or some other such reason; for the effect of such a blow cannot of course be ascribed to nature.

[8.4] Again in all trees the branches always seem to have more knots, because the intermediate parts have not yet developed, just as the newly formed branches of the fig are the roughest,’ and in the vine the highest shoots. (For to the knot in other trees correspond the ‘eye’ in the vine, the joint in the reed) In some trees again there occurs, as it were, a diseased formation of small shoots,- as in elm, oak, and especially in the plane; and this is universal if they grow in rough, waterless or windy spots. Apart from any such cause this affection occurs near the ground in what one may call the ‘head’ of the trunk, when the tree is getting old.

[8.5] Some trees again have what are called by some ‘excrescences’ (or something corresponding), as the olive; for this name belongs most properly to that tree, and it seems most liable to the affection; and some call it ‘stump,’ some Arotone, others have a different name for it. It does not occur, or only occurs to a less extent, in straight young trees, which have a single root and no side-growths. To the olive also, both wild and cultivated, are peculiar certain thickenings in the stem.

[9.1] Now those trees which grow chiefly or only in the direction of their

height are such as silver-fir date-palm cypress, and in general those which have a single stem and not many roots or branches (the date-palm, it may be added, has no side-growths at all). And trees like these have also similar growth downwards. Some however divide from the first, such as apple; some have many branches, and their greater mass of growth high up, as the pomegranate: however training position and cultivation chiefly contribute to all of these characters. In proof of which we have the fact that the same trees which, when growing close together, are tall and slender, when grown farther apart become stouter and shorter; and if we from the first let the branches grow freely, the tree becomes short, whereas, if we prune them, it becomes tall, — for instance, the vine. This too is enough for proof that even some potherbs acquire the form of a tree, as we said of mallow and beet. Indeed all things grow well in congenial places. . . . For even among those of the same kind those which grow in congenial places have less knots, and are taller and more comely: thus the silver-fir in Macedon is superior to other silver-firs, such as that of Parnassus. Not only is this true of all these, but in general the wild woodland is more beautiful and vigorous on the north side of the mountain than on the south.

[9.2] Again some trees are evergreen, some deciduous. Of cultivated trees, olive date-palm bay myrtle a kind of fir and cypress are evergreen, and among wild trees silver-fir, fir, Phoenician cedar, yew, odorous cedar, the tree which the Arcadians call ‘cork-oak’ (holm-oak), mock-privet, prickly cedar, ‘wild pine’, tamarisk, box, kermes-oak, holly, alaternus, cotoneaster, hybrid arbutus (all of which grow about Olympus) andrachne, arbutus, terebinth, ‘wild bay’ (oleander). Andrachne and arbutus seem to cast their lower leaves, but to keep those at the end of the twigs perennially, and to be always adding leafy twigs. These are the trees which are evergreen.

[9.3] Of shrubby plants these are evergreen: — ivy, bramble, buckthorn, reed, kedris (juniper) — for there is a small kind of kedros so called which does not grow into a tree. Among under-shrubs and herbaceous plants there are rue, cabbage, rose, gilliflower, southernwood, sweet marjoram, tufted thyme, marjoram, celery, alexanders, poppy, and a good many more kinds of wild plants. However some of these too, while evergreen as to their top growths, shed their other leaves, as marjoram and celery; for rue too is injuriously affected and changes its character.

[9.4] And all the evergreen plants in the other classes too have narrower leaves and a certain glossiness and fragrance. Some moreover which are not evergreen by nature become so because of their position, as was said about the plants at Elephantine and Memphis, while lower down the Nile in the Delta there is but a very short period in which they are not making new leaves. It is said that in Crete in the district of Gortyna there is a plane near a certain spring which does not lose its leaves; (indeed the story is that it was under this tree that Zeus lay with Europa), while all the other plants in the neighbourhood shed their leaves. At Sybaris there is an oak within sight of the city which does not shed its leaves, and they say that it does not come into leaf along with the others, but only after the rising of the dog-star. It is said that in Cyprus too there is a plane which has the same peculiarity.

[9.5] The fall of the leaves in all cases takes place in autumn or later, but it occurs later in some trees than in others, and even extends into the winter. However the fall of the leaf does not correspond to the growth of new leaves (in which case those that come into leaf earlier would lose their leaves earlier), but some (such as the almond) which are early in coming into leaf are not earlier than the rest in losing their leaves, but are even comparatively late.

[9.6] Others again, such as the mulberry, come into leaf late, but are hardly at all later than the others in shedding their leaves. It appears also that position and a moist situation conduce to keeping the leaves late; for those which grow in dry places, and in general where the soil is light, shed their leaves earlier, and the older trees earlier than young ones. Some even cast their leaves before the fruit is ripe, as the late kinds of fig and pear.

[9.7] In those which are evergreen the shedding and withering of leaves take place by degrees; for it is not the same leaves which always persist, but fresh ones are growing while the old ones wither away. This happens chiefly about the summer solstice. Whether in some cases it occurs even after the rising of Arcturus or at a quite different season is matter for enquiry. So much for the shedding of leaves.

[10.1] Now, while the leaves of all other trees are all alike in each tree, those of the ivy — and of the plant called kroton (castor-oil plant) are unlike one another and of different forms. The young leaves in these are round, the old ones angular, and eventually all the leaves assume that form. On the other hand in the ivy, when it is young, the leaves are somewhat angular, but when

it is older, they become rounder: for in this plant too a change of form takes place. There is a peculiarity special to the olive lime elm and abele: their leaves appear to invert the upper surface after the summer solstice, and by this men know that the solstice is past. Now all leaves differ as to their upper and under surfaces; and in most trees the upper surfaces are greener and smoother, as they have the fibres and veins in the under surfaces, even as the human hand has its 'lines,' but even the upper surface of the leaf of the olive is sometimes whiter and less smooth. So all or most leaves display their upper surfaces, and it is these surfaces which are exposed to the light. Again most leaves turn towards the sun; wherefore also it is not easy to say which surface is next to the twig; for, while the way in which the upper surface is presented seems rather to make the under surface closer to it, yet nature desires equally that the upper surface should lie the nearer, and this is specially seen in the turning back of the leaf towards the sun. One may observe this in trees whose leaves are crowded and opposite, such as those of myrtle.

[10.2] Some think that the nourishment too is conveyed to the upper surface through the under surface, because this surface always contains moisture and is downy, but they are mistaken. It may be that this is not due to the trees' special character, but to their not getting an equal amount of sunshine, though the nourishment conveyed through the veins or fibres is the same in both cases. That it should be conveyed from one side to the other is improbable, when there are no passages for it nor thickness for it to pass through. However it belongs to another part of the enquiry to discuss the means by which nourishment is conveyed.

[10.3] Again there are various other differences between leaves; some trees are broad-leaved, as vine fig and plane, some narrow-leaved, as olive, pomegranate, myrtle. Some have, as it were, spinous' leaves, as fir, Aleppo pine, prickly cedar; some, as it were, fleshy leaves; and this is because their leaves are of fleshy substance, as cypress, tamarisk, apple, among undershrubs kneoros, and stoibe, and among herbaceous plants house-leek, and hylwort. This plant is good against moth in clothes. For the leaves of beet and cabbage are fleshy in another way, as are those of the various plants called rue; for their fleshy character is seen in the flat instead of in the round. Among shrubby plants the tamarisk has fleshy leaves. Some again have reedy leaves, as date-palm, doum-palm and such like. But, generally speaking, the leaves of

these end in a point; for reeds galingale sedge and the leaves of other marsh plants are of this character. The leaves of all these are compounded of two parts, and the middle is like a keel, placed where in — other leaves is a large passage dividing the two halves. Leaves differ also in their shapes; some are round, as those of pear, some rather oblong, as those of the apple; some come to a sharp point and have spinous projections at the side, as those of smilax. So far I have spoken of undivided leaves; but some are divided and like a saw, as those of silver-fir and of fern. To a certain extent those of the vine are also divided, while those of the fig one might compare to a crow's foot. Some leaves again have notches, as those of elm filbert and oak, others have spinous projections both at the tip and at the edges, as those of kermes oak, oak, smilax, bramble, Christ's thorn and others. The leaf of fir, Aleppo pine, silver-fir and also of prickly cedar and kedris (juniper) has a spinous point at the tip. Among other trees there is none that we know which has spines for leaves altogether, but it is so with other woody plants, as akorna, drypis, pine thistle and almost all the plants which belong to that class. For in all these spines, as it were, take the place of leaves, and, if one is not to reckon these plants. It is peculiar to pot-herbs to have hollow leaves, as in onion and horn-onion.

[10.4] To sum up, the differences between leaves are shewn in size, number, shape, hollowness, in breadth, roughness and their opposites, and in the presence or absence of spinous projections; also as to their attachment, according to the part from which they spring or the means by which they are attached; the part from which they spring being the root or a branch or the stalk or a twig, while the means by which they are attached may be a leaf-stalk, or they may be attached directly; and there may be several leaves attached by the same leaf-stalk. Further some leaves are fruit-bearing, enclosing the fruit between them, as the Alexandrian laurel, which has its fruit attached to the leaves. These are all the differences in leaves stated somewhat generally, and this is a fairly complete list of examples.

[10.5] Leaves are composed some of fibre bark and flesh, as those of the fig and vine, some, as it were, of fibre alone, as those of reeds and corn. But moisture is common to all, for it is found both in leaves and in the other annual parts, leaf-stalk, flower, fruit and so forth but more especially in the parts which are not annual; in fact no part is without it. Again it appears that some leaf-stalks are composed only of fibre, as those of corn and reeds, some

of the same materials as the stalks.

[10.6] Of flowers some are composed of bark veins and flesh, some of flesh only, as those in the middle of cuckoo-pint.'

[10.7] So too with fruits; some are made of flesh and fibre, some of flesh alone, and some of skin also. And moisture is necessarily found in these also. The fruit of plums and cucumbers is made of flesh and fibre, that of mulberries and pomegranates of fibre and skin. The materials are differently distributed in different fruits, but of nearly all the outside is bark, the inside flesh, and this in some cases includes a stone.)

[11.1] Last in all plants comes the seed. This possesses in itself natural moisture and warmth, and, if these fail, the seeds are sterile, like eggs in the like case. In some plants the seed comes immediately inside the envelope, as in date filbert almond (however, as in the case of the date, there may be more than one covering). In some cases again there is flesh and a stone between the envelope and the seed, as in olive plum and other fruits. Some seeds again are enclosed in a pod, some in a husk, some in a vessel, and some are completely naked.

[11.2] Enclosed in a pod are not only the seeds of annual plants, as leguminous plants, and of considerable numbers of wild plants, but also those of certain trees, as the carob-tree (which some call the 'Egyptian fig'), Judas-tree, and the koloitium of the Liparae islands. In a husk are enclosed the seeds of some annuals, as wheat and millet; and in like manner some plants have their seeds in a vessel, some have them naked. In a vessel are those of the poppy and plants of the poppy kind; (the case of sesame however is somewhat peculiar), while many pot-herbs have their seeds naked, as dill coriander-anise cummin fennel and many others. No tree has naked seeds, but either they are enclosed in flesh or in shells, which are sometimes of leathery nature, as the acorn and the sweet chestnut, sometimes woody, as almond and nut. Moreover no tree has its seeds in a vessel, unless one reckons a cone as a vessel, because it can be separated from the fruits.

[11.3] The actual seeds are in some cases fleshy in themselves, as all those which resemble nuts or acorns; in some cases the fleshy part is contained in a stone, as in olive bay and others. The seeds in some plants again merely consist of a stone, or at least are of stone-like character, and are, as it were, 'dry'; for instance those of plants like safflower, millet and many pot-herbs.

Most obviously of this character are those of the date, for they contain no cavity, but are throughout dry; — not but what there must be even in them some moisture and warmth, as we have said.

[11.3] Further seeds differ in that in some cases they are massed together, in others they are separated and arranged in rows, as those of the gourd and bottle-gourd, and of some trees, such as the citron. Again of those that are massed together some differ in being contained in a single case, as those of pomegranate pear apple vine and fig; others in being closely associated together, yet not contained in a single case, as, among annuals, those which are in an ear — unless one regards the ear as a case. In that case the grape-cluster and other clustering fruits will come under the description, as well as all those plants which on account of good feeding or excellence of soil bear their fruits massed together, as they say the olive does in Syria and elsewhere.

[11.5] But this too seems to be a point of difference, that some grow massed together from a single stalk and a single attachment, as has been said in the case of plants with clusters or ears whose seeds do not grow contained in one common case; while others grow otherwise. For in these instances, if one takes each seed or case separately, it has its own special point of attachment, for instance each grape or pomegranate, or again each grain of wheat or barley. This would seem to be least of all the case with the seeds of apples and pears, since these touch one another and are enclosed in a sort of skin-like membrane, outside which is the fruit-case. However each of these too has its own peculiar point of attachment and character; this is most obvious in the separation of the pomegranate seeds, for the stone is attached to each, and the connexion is not, as in figs, obscured by the moisture. For here too there is a difference, although in both cases the seeds are enclosed in a sort of fleshy substance, as well as in the case which encloses this and the other parts of the fruit. For in the pomegranate the stones have this moist fleshy substance enclosing each separate stone; but in the case of fig-seeds, as well as in that of grape stones and other plants which have the same arrangement, the same pulp is common to all. However one might find more such differences, and one should not ignore the most important of them, namely those which specially belong to the plant's natural character.

[12.1] The differences in taste, shape, and form as a whole are tolerably evident to all, so that they do not need explanation; except that it should be

stated that the case containing the fruit is never right-lined in shape and never has angles. Of tastes some are like wine, as those of vine mulberry and myrtle: some are like olive-oil, as, besides olive itself, bay, hazel, almond, fir, Aleppo pine, silver fir; some like honey, as fig, date, chestnut; some are pungent, as marjoram, savory cress mustard; some are bitter, as wormwood, centaury. Some also are remarkably fragrant, as anise and juniper; of some the smell would seem to be insipid,- as in plums; of others sharp, as in pomegranates and some kinds of apples. But the smells even of those in this class must in all cases be called winelike, though they differ in different kinds, on which matter we must speak more precisely, when we come to speak of flavours,-reckoning up the different kinds themselves, and stating what differences there are between them, and what is the natural character and property of each.

[12.2] Now the sap of the trees themselves assumes different kinds of tastes as was said; sometimes it is milky, as that of the fig and poppy, sometimes like pitch, as in silver-fir, fir and the conifers; sometimes it is insipid, as in vine pear and apple, as well as such pot-herbs as cucumber gourd lettuce; while others' again have a certain pungency, such as the juice of thyme and savory; others have a fragrance, such as the juices of celery, dill, fennel, and the like. To speak generally, all saps correspond to the special character of the several trees, one might almost add, to that of each plant. For every plant has a certain temperament and composition of its own, which plainly belongs in a special sense to the fruits of each. And in most of these is seen a sort of correspondence with the character of the plant as a whole, which is not however exact nor obvious; it is chiefly in the fruitcases that it is seen, and that is why it is the character of the flavour which becomes more complete and matures into something separate and distinct; in fact we must consider the one as 'matter,' the other — as 'form' or specific character.

[12.3] Again the seeds themselves and the coats containing them have different flavours. And, to speak generally, all parts of trees and plants, as root stem branch leaf fruit, have a certain relationship to the character of the whole, even if there is variation in scents and tastes, so that of the parts of the same plant some are fragrant and sweet to the taste, while others are entirely scentless and tasteless.

[12.4] For in some plants the flowers are more fragrant than the leaves, in

others on the contrary it is rather the leaves and twigs which are fragrant, as in those used for garlands. In others again it is the fruits; in others it is neither of these parts, but, in some few cases, the root or some part of it. And so too with the flavours. Some leaves and some fruit-pulps are, and some are not good for food. Most peculiar is the case of the lime: the leaves of this are sweet, and many animals eat them, but the fruit no creature eats, (for, as to the contrary case, it would not be at all surprising that the leaves should not be eaten, while the fruits were eaten not only by us but by other animals). But concerning this and other such matters we must endeavour to consider the causes on some other occasion.

[13.1] For the present let so much be clear, that in all the parts of plants there are numerous differences shewn in a variety of ways. Thus of flowers some are downy, as that of the vine, mulberry and ivy, some are 'leafy,' as in almond, apple, pear, plum. Again some of these flowers are conspicuous, while that of the olive, though it is 'leafy,' is inconspicuous. Again it is in annual and herbaceous plants alike that we find some leafy, some downy. All plants again have flowers either of two colours or of one; most of the flowers of trees are of one colour and white, that of the pomegranate being almost the only one which is red, while that of some almonds is reddish. The flower of no other cultivated trees is gay nor of two colours, though it may be so with some uncultivated trees, as with the flower of silverfir, for its flower is of saffron colour; and so with the flowers of those trees by the ocean which have, they say, the colour of roses.

[13.2] However, among annuals, most are of this character — their flowers are two-coloured and twofold. I mean by 'twofold' that the plant has another flower inside the flower, in the middle, as with rose, lily, violet. Some flowers again consist of a single 'leaf,' having merely an indication of more, as that of bindweed. For in the flower of this the separate 'leaves' are not distinct; nor is it so in the lower part of the narcissus,' but there are angular projections from the edges. And the flower of the olive is nearly of the same character.

[13.3] But there are also differences in the way of growth and the position of the flower; some plants have it close above the fruit, as vine and olive; in the latter, when the flowers drop off, they are seen to have a hole through them, and this men take for a sign — whether the tree has blossomed well; for if the flower is burnt up or sodden, it sheds the fruit along with itself, and so there is

no hole through it. The majority of flowers have the fruit-case in the middle of them, or, it may be, the flower is on the top of the fruit-case, as in pomegranate apple pear plum and myrtle, and among under-shrubs, in the rose and in many of the coronary plants. For these have their seeds below, beneath the flower, and this is most obvious in the rose because of the size of the seed-vessel. In some cases again the flower is on top of the actual seeds, as in pine-thistle safflower and all thistle-like plants; for these have a flower attached to each seed. So too with some herbaceous plants, as anthemon, and among pot-herbs, with cucumber gourd and bottle-gourd; all these have their flowers attached on top of the fruits, and the flowers persist for a long time while the fruits are developing.

[13.4] In some other plants the attachment is peculiar, as in ivy and mulberry; in these the flower is closely attached to the whole fruit-case; it is not however set above it, nor in a seed-vessel that envelops each separately, but it occurs in the middle part of the structure — except that in some cases it is not easily recognised because it is downy.

[13.5] Again some flowers are sterile, as in cucumbers those which grow at the ends of the shoot, and that is why men pluck them off, for they hinder the growth of the cucumber. And they say that in the citron those flowers which have a kind of distaff growing in the middle are fruitful, but those that have it not are sterile. And we must consider whether it occurs also in any other flowering plants that they produce sterile flowers, whether apart from the fertile flowers or not. For some kinds of vine and pomegranate certainly are unable to mature their fruit, and do not produce anything beyond the flower.

[13.6] (The flower of the pomegranate is produced abundantly and is solid: in general appearance it is a substantial structure with a flat top, like the flower of the rose; but, as seen from below, the inferior part of the flower is different-looking, being like a little two-eared jar turned on one side and having its rim indented.)

[13.7] Some say that even of plants of the same kind some specimens flower while others do not; for instance that the ‘male’ date-palm flowers but the ‘female’ does not, but exhibits its fruit without any antecedent flower. Such is the difference which we find between plants of the same kind; and the like may be said in general of those which cannot mature their fruit. And it is plain from what has been said that flowers shew many differences of character.

[14.1] Again as to the production of fruit trees differ in the following respects. Some bear on their new shoots, some on last year's wood, some on both. Fig and vine bear on their new shoots; on last year's wood olive pomegranate apple almond pear myrtle and almost all such trees. And, if any of these does happen to conceive and to produce flowers on its new shoots, (for this does occur in some cases, as with myrtle, and especially, one may say, in the growth which is made after the rising of Arcturus) it can not bring them to perfection, but they perish half-formed. Some apples again of the twice-bearing kinds and certain other fruit-trees bear both on last year's wood and on the new shoots; and so does the olynihos, which ripens its fruit as well as bearing figs on the new shoots.

[14.2] Most peculiar is the growth of fruit direct from the stem, as in the sycamore; for this, they say, bears fruit on the stem. Others say that it bears both in this way and also on the branches, like the carob; for the latter bears on the branches too, though not abundantly: (the name carob is given to the tree which produces what are called 'Egyptian figs'). Again some trees, and some plants in general, produce fruit at the top, others at the sides, others in both ways. But bearing fruit at the top is less common in trees than in other plants, as among grains in those which have an ear, among shrubby plants in heath privet chaste tree and certain others, and among pot-herbs in those with a bulbous root. Among plants which bear both on the top and at the sides are certain trees and certain potherbs, as blite, orach, cabbage. I say trees, since the olive does this too in a way, and they say that, when it bears at the top, it is a sign of fruitfulness. The date-palm too bears at the top, in a sense, but this tree also has its leaves and shoots at the top; indeed it is in the top that its whole activity is seen. Thus we must endeavour to study in the light of the instances mentioned the differences seen in the various parts of the plant.

[14.3] But there appear to be the following differences which affect the plant's whole being: some are cultivated, some wild; some fruitful, some barren; some evergreen, some deciduous, as was said, while some again have no leaves at all; some are flowering plants, some flowerless; some are early, some late in producing their shoots and fruits; and there are other differences similar to these. Now it may be said that such differences are seen in the parts, or at least that particular parts are concerned in them. But the special, and in a way the most important distinction is one which may be seen in animals too,

namely, that some are of the water, some of the land. For of plants too there is a class that cannot grow except in moisture, while others will indeed grow on dry land, but they lose their character and are inferior. Again of all trees, one might almost say, and of all plants there are several forms to each kind; for hardly any kind contains but a single form.

[14.4] But the plants which are called respectively cultivated and wild shew this difference in the clearest and most emphatic way, for instance the cultivated and wild forms of fig olive and pear. In each of these pairs there are differences in fruit and leaves, and in their forms and parts generally. But most of the wild kinds have no names and few know about them, while most of the cultivated kinds have received names — and they are more commonly observed; I mean such plants as vine, fig, pomegranate, apple, pear, bay, myrtle and so forth; for, as many people make use of them, they are led also to study the differences.

[14.5] But there is this peculiarity as to the two classes respectively; in the wild kinds men find only or chiefly the distinction of male ‘and’ female,’ while in the cultivated sorts they recognise a number of distinguishing features. In the former case it is easy to mark and count up the different forms, in the latter it is harder because the points of difference are numerous. However we have said enough for study of the differences between parts and between general characters. We must now speak of the methods of growth, for this subject comes naturally after what has been said.

BOOK II. OF PROPAGATION, ESPECIALLY OF TREES.

[1.1] The ways in which trees and plants in general originate are these: — spontaneous growth, growth from seed, from a root, from a piece torn off, from a branch or twig, from the trunk itself; or again from small pieces into which the wood is cut up (for some trees can be produced even in this manner). Of these methods spontaneous growth comes first, one may say, but growth from seed or root would seem most natural; indeed these methods too may be called spontaneous; wherefore they are found even in wild kinds, while the remaining methods depend on human skill or at least on human choice.

[1.2] However all plants start in one or other of these ways, and most of them in more than one. Thus the olive is grown in all the ways mentioned, except from a twig; for an olive-twig will not grow if it is set in the ground, as a fig or pomegranate will grow from their young shoots. Not but what some say that cases have been known in which, when a stake of olive-wood was planted to support ivy, it actually lived along with it and became a tree; but such an instance is a rare exception, while the other methods of growth are in most cases the natural ones. The fig grows in all the ways mentioned, except from root-stock and cleft wood; apple and pear grow also from branches, but rarely. However it appears that most, if not practically all, trees may grow from branches, if these are smooth, young and vigorous. But the other methods, one may say, are more natural, and we must reckon what may occasionally occur as a mere possibility.

[1.3] In fact there are quite few plants which grow and are brought into being more easily from the upper parts, as the *viae* is grown from branches; for this, though it cannot be grovⁿ from the head,' yet can be grown from the branch, as can all similar trees and under-shrubs, for instance, as it appears, rue, gilliflower, bergamot-mint, tufted thyme, calamint. So the commonest ways of growth with all plants are from a piece torn off or from seed; for all plants that have seeds grow also from seed. And they say that the bay too grows from a piece torn off, if one takes off the young shoots and plants them; but it is necessary that the piece torn off should have part of the root or stock attached to it. However the pomegranate and 'spring apple' will grow even without

this, and a slip of almond grows if it is planted. The olive grows, one may say, in more ways than any other plant; it grows from a piece of the trunk or of the stock, from the root, from a twig, and from a stake, as has been said. Of other plants the myrtle also can be propagated in several ways; for this too grows from pieces of wood and also from pieces of the stock. It is necessary however with this, as with the olive, to cut up the wood into pieces not less than a span long and not to strip off the bark.

[1.4] Trees then grow and come into being in the abovementioned ways; for as to methods of grafting and inoculation, these are, as it were, combinations of different kinds of trees; or at all events these are methods of growth of a quite different class and must be treated of at a later stage.

[2.1] Of under-shrubs and herbaceous plants the greater part grow from seed or a root, and some in both ways; some of them also grow from cuttings, as has been said, while roses and lilies grow from pieces of the stems, as also does dog's-tooth grass. Lilies and roses also grow when the whole stem is set. Most peculiar is the method of growth from an exudation; for it appears that the lily grows in this way too, when the exudation that has been produced has dried up. They say the same of alexanders, for this too produces an exudation. There is a certain reed also which grows if one cuts it in lengths from joint to joint and sets them sideways, burying it in dung and soil. Again they say that plants which have a bulbous root are peculiar in their way of growing from the root.

[2.2] The capacity for growth being shewn in so many ways, most trees, as was said before, originate in several ways; but some come only from seed, as silver fir, fir, Aleppo pine, and in general all those that bear cones: also the date-palm, except that in Babylon it may be that, as some say, they take cuttings from it. The cypress in most regions grows from seed, but in Crete from the trunk also, for instance in the hill country about Tarra; for there grows the cypress which they clip, and when cut it shoots in every possible way, from the part which has been cut, from the ground, from the middle, and from the upper parts; and occasionally, but rarely, it shoots from the roots also.

[2.3] About the oak accounts differ; some say it only grows from seed, some from the root also, but not vigorously, others again that it grows from the trunk itself, when this is cut. But no tree grows from a piece torn off or from a

root except those which make side-growths.

[2.4] However in all the trees which have several methods of originating the quickest method and that which promotes the most vigorous growth is from a piece torn off, or still better from a sucker, if this is taken from the root. And, while all the trees which are propagated thus or by some kind of slip seem to be alike in their fruits to the original tree, those raised from the fruit, where this method of growing is also possible, are nearly all inferior, while some quite lose the character of their kind, as vine apple fig pomegranate pear. As for the fig, no cultivated kind is raised from its seed, but either the ordinary wild fig or some wild kind is the result, and this often differs in colour from the parent; a black fig gives a white, and conversely. Again the seed of an excellent vine produces a degenerate result, which is often of quite a different kind; and at times this is not a cultivated kind at all, but a wild one of such a character that it does not ripen its fruit; with others again the result is that the seedlings do not even mature fruit, but only get as far as flowering.

[2.5] Again the stones of the olive give a wild olive, and the seeds of a sweet pomegranate give a degenerate kind, while the stoneless kind gives a hard sort and often an acid fruit. So also is it with seedlings of pears and apples; pears give a poor sort of wild pears, apples produce an inferior kind which is acid instead of sweet; quince produces wild quince. Almond again raised from seed is inferior in taste and in being hard instead of soft; and this is why men bid us graft on to the almond, even when it is fully grown, or, failing that, frequently plant the offsets.

[2.6] The oak also deteriorates from seed; at least many persons having raised trees from acorns of the oak at Pyrrha could not produce one like the parent tree. On the other hand they say that bay and myrtle sometimes improve by seeding, though usually they degenerate and do not even keep their colour, but red fruit gives black — as happened with the tree in Antandros; and frequently seed of a ‘female’ cypress produces a male tree. The datepalm seems to be about the most constant of these trees, when raised from seed, and also the ‘conebearing pine’ (stone-pine) and the ‘lice-bearing pine.’ So much for degeneration in cultivated trees; among wild kinds it is plain that more in proportion degenerate from seed, since the parent trees are stronger. For the contrary would be very strange, seeing that degenerate forms are found even in cultivated trees, and among these only in those which are

raised from seed. (As a general rule these are degenerate, though men may in some cases effect a change by cultivation).

[2.7] Again differences in situation and climate affect the result. In some places, as at Philippi, the soil seems to produce plants which resemble their parent; on the other hand a few kinds in some few places seem to undergo a change, so that wild seed gives a cultivated form, or a poor form one actually better. We have heard that this occurs, but only with the pomegranate, in Egypt and Cilicia; in Egypt a tree of the acid kind both from seeds and from cuttings produces one whose fruit has a sort of sweet taste, while about Soli in Cilicia near the river Pinaros (where the battle with Darius was fought) all those pomegranates raised from seed are without stones.

[2.8] If anyone were to plant our palm at Babylon, it is reasonable to expect that it would become fruitful and like the palms of that country. And so would it be with any other country which has fruits that are congenial to that particular locality; for the locality is more important than cultivation and tendance. A proof of this is the fact that things transplanted thence become unfruitful, and in some cases refuse to grow altogether.

[2.9] There are also modifications due to feeding and attention of other kinds, which cause the wild to become cultivated, or again cause some cultivated kinds to go wild, such as pomegranate and almond. Some say that wheat has been known to be produced from barley, and barley from wheat, or again both growing on the same stool; but these accounts should be taken as fabulous. Anyhow those things which do change in this manner do so spontaneously,- and the alteration is due to a change of position (as we said happens with pomegranates in Egypt and Cilicia), and not to any particular method of cultivation.

[2.10] So too is it when fruit-bearing trees become unfruitful, for instance the persion when moved from Egypt, the date-palm when planted in Hellas, or the tree which is called 'poplar' in Crete,' if anyone should transplant it. Some again say that the sorb becomes unfruitful if it comes into a very warm position, since it is by nature cold-loving. It is reasonable to suppose that both results follow because the natural circumstances are reversed, seeing that some things entirely refuse to grow when their place is changed. Such are the modifications due to position.

[2.11] As to those due to method of culture, the changes which occur in

things grown from seed are as was said; (for with things so grown also the changes are of all kinds). Under cultivation the pomegranate and the almond change character, the pomegranate if it receives pig-manure and a great deal of river water, the almond if one inserts a peg and removes for some time the gum which exudes and gives the other attention required. In like manner plainly some wild things become cultivated and some cultivated things become wild: for the one kind of change is due to cultivation, the other to neglect: — however it might be said that this is not a change but a natural development towards a better or an inferior form; (for that it is not possible to make a wild olive pear or fig into a cultivated olive pear or fig). As to that indeed which is said to occur in the case of the wild olive, that if the tree is transplanted with its topgrowth entirely cut off, it produces ‘coarse olives,’ this is no very great change. However it can make no difference which way one takes this.

[3.1] Apart from these changes it is said that in such plants there is a spontaneous kind of change, sometimes of the fruit, sometimes of the tree itself as a whole, and soothsayers call such changes portents. For instance, an acid pomegranate, it is said, may produce sweet fruit, and conversely; and again, in general, the tree itself sometimes undergoes a change, so that it becomes sweet instead of acid, or the reverse happens. And the change to sweet is considered a worse portent. Again a wild fig may turn into a cultivated one, or the contrary change take place; and the latter is a worse portent. So again a cultivated olive may turn into a wild one, or conversely, but the latter change is rare. So again a white fig may change into a black one, and conversely; and similar changes occur in the vine.

[3.2] Now these changes they interpret as miraculous and contrary to nature; but they do not even feel any surprise at the ordinary changes, for instance, when the ‘smoky’ vine, as it is called, produces alike white grapes instead of black or black grapes instead of white. Of such changes the soothsayers take no account, any more than they do of those instances in which the soil produces a natural change, as was said of the pomegranate in Egypt. But it is surprising when such a change occurs in our own country, because there are only one or two instances and these separated by wide intervals of time. However, if such changes occur, it is natural that the variation should be rather in the trait than in the tree as a whole. In fact the following irregularity also

occurs in fruits; a fig-tree has been known to produce i.s figs from behind the leaves, pomegranate and vines from the stem, while the vine has been known to bear fruit without leaves. The olive again has been known to lose its leaves and yet produce its fruit; this is said to have happened to Thettalos, son of Pisistratus. This may be due to inclement weather; and some changes, which seem to be abnormal, but are not really so, are due to other accidental causes; for instance, there was an olive that, after being completely burnt down, sprang up again entire, the tree and all its branches. And in Boeotia an olive whose young shoots had been eaten off by locusts grew again: in this case however the shoots had, so to speak, only been shed. But after all such phenomena are perhaps far from strange, since the cause in each case is obvious; rather is it strange that trees should bear fruit not at the places where it naturally forms, or else fruit which does not belong to the character of the tree. And most surprising of all is it when, as has been said, there is a change in the entire character of the tree. Such are the changes which occur in trees.

[4.1] Of other plants it appears that bergamot-mint turns into cultivated mint, unless it is fixed by special attention; and this is why men frequently transplant it; so too wheat turns into darnel. Now in trees such changes, if they occur, are spontaneous, but in annual plants they are deliberately brought about: for instance, one-seeded wheat and rice-wheat change into wheat, if bruised before they are sown; and this does not happen at once, but in the third year. This change resembles that produced in the seeds by difference of soil; for these grains vary according to the soil, and the change takes about the same time as that which occurs in one-seeded wheat. Again wild wheats and barleys also with tendance and cultivation change in a like period.

[4.2] These changes appear to be due to change of soil and cultivation, and in some cases the change is due to both, in others to cultivation alone; for instance, in order that pulses may not become uncookable, men bid one moisten the seed in nitre for a night and sow it in dry ground the next day. To make lentils vigorous they plant the seeds in dung; to make chick-peas large they bid one moisten the seed while still in the pods, before sowing. Also the time of sowing makes differences which conduce to digestibility and harmlessness: thus, if one sows vetches in spring, they become quite harmless and are not indigestible like those sown in autumn.

[4.3] Again in pot-herbs change is produced by cultivation; for instance, they

say that, if celery seed is trodden and rolled in after sowing, it comes up curly; it also varies from change of soil, like other things. Such variations are common to all; we must now consider whether a tree, like animals, becomes unproductive from mutilation or removal of a part. At all events it does not appear that division is an injury, as it were, which affects the amount of fruit produced; either the whole tree perishes, or else, if it survives, it bears fruit. Old age however is a cause which in all plants puts an end to life.

[4.4] It would seem more surprising if the following changes occurred in animals naturally and frequently; some animals do indeed seem to change according to the seasons, for instance, the hawk the hoopoe and other similar birds. So also changes in the nature of the ground produce changes in animals, for instance, the water-snake changes into a viper, if the marshes dry up. Most obvious are certain changes in regard to the way in which animals are produced, and such changes run through a series of creatures; thus a caterpillar changes into a chrysalis, and this in turn into the perfect insect; and the like occurs in a number of other cases. But there is hardly anything abnormal in this, nor is the change in plants, which is the subject of our enquiry, analogous to it. That kind of change occurs in trees and in all woodland plants generally, as was said before, and its effect is that, when a change of the required character occurs in the climatic conditions, a spontaneous change in the way of growth ensues. These instances must suffice for investigation of the ways in which plants are produced or modified.

[5.1] Since however methods of cultivation and tendance largely contribute, and, before these, methods of planting, and cause great differences, of these too we must speak.

[5.2] And first of methods of planting: as to the seasons, we have already stated at what seasons one should plant. Further we are told that the plants chosen should be the best possible, and should be taken from soil resembling that in which you are going to plant them, or else inferior; also the holes should be dug as long as possible beforehand, and should always be deeper than the original holes, even for those whose roots do not run very deep.

[5.3] Some say that no root goes down further than a foot and a half, and accordingly they blame those who plant deeper. However there are many instances in which it appears that what they say does not hold good: a plant which is naturally deep-rooting pushes much deeper if it finds either a deep

mass of soil or a position which favours such growth or again the kind of ground which favours it. In fact, a man once said that when he was transplanting a fir which he had uprooted with levers, he found that it had a root more than eight cubits long, though the whole of it had not been removed, but it was broken off.

[5.4] The slips for planting should be taken, if possible, with roots attached, or, failing that, from the lower rather than from the higher parts of the tree, except in the case of the vine; those that have roots should be set upright, while in the case of those which have none about a handsbreadth or rather more of the slip should be buried. Some say that part even of those which have roots should be buried, and that the position should be the same as that of the tree from which the slip was taken, facing north or east or south, as the case may be. With those plants with which it is possible, shoots from the boughs should also, they say, be planted, some being set on the trees themselves, as with olive pear apple and ng, but in other cases, as in that of the vine, they must be set separately, for that the vine cannot be grafted on itself.

[5.5] If the slips cannot be taken with root or stock attached, as with the olive, they say that one must split the wood at the lower end and plant with a stone on top; and the fig and other trees must be treated in like manner with the olive. The fig is also propagated by sharpening a stout shoot and driving it in with a hammer, till only a small piece of it is left above ground, and then piling sand above so as to earth it up; and they say that the plants thus raised grow finer up to a certain age.

[5.6] Similar is the method used with vines, when they are propagated by the 'peg' method; for the peg makes a passage for that sort of shoot on account of its weakness; and in the same manner men plant the pomegranate and other trees. The fig progresses more quickly and is less eaten by grubs, if the cutting is set in a squill-bulb; in fact anything so planted is vigorous and grows faster. All those trees which are propagated by pieces cut from the stem should be planted with the cut part downwards,' and the pieces cut off should not be less than a handsbreadth in length, as Mas said, and the bark should be left on. From such pieces new shoots grow, and as they grow, one should keep on heaping up earth about them, till the tree becomes strong. This kind of propagation is peculiar to the olive and myrtle, while the others are more or

less common to all trees.

[5.7] The fig is better than any other tree at striking roots, and will, more than any other tree, grow by any method of propagation. We are told that, in planting the pomegranate, myrtle or bay, one should set two trees close together, not further than nine feet apart, apples a little further, pears and wild pears still further, almonds and figs further still, and in like manner the olive. Again the distance apart must be regulated by the nature of the ground, being less — in hilly parts than in low ground.

[5.8] Most important of all, one may say, is it to assign to each the suitable soil; for then is the tree most vigorous. Speaking generally, they say that low ground is most suitable for the olive fig and vine, and the lower slopes of hills for fruit trees. Nor should one fail to note what soil suits each variety even of those closely related. There is the greatest difference, one may say, between the different kinds of vine: for they say that there are as many kinds of vine as there are of soil. If they are planted as their nature requires, they turn out well, if otherwise, they are unfruitful. And these remarks apply almost equally to all trees.

[6.1] The method of propagating date-palms is peculiar and exceptional, as also is their subsequent cultivation. They plant several seeds together, putting two below and two above, which are fastened on; but all face downwards. For germination starts not, as some say, from the 'reverse' or hollow side, but from the part which is uppermost; wherefore in joining on the seeds which are placed above one must not cover up the points from which the growth is to come; and these can be recognised by experts. And the reason why they set several together is that a plant that grows from one only is weak. The roots which grow from these seeds become entangled together and so do the first shoots from the very start, so that they combine to make a single stem.

[6.2] Such is the method of growing from the fruits. But propagation is also possible from the tree itself, by taking off the top, which contains the 'head.' They take off about two cubits' length, and, splitting it, set the moist end.- It likes a soil which contains salt; wherefore, where such soil is not available, the growers sprinkle salt about it; and this must not be done about the actual roots: one must keep the salt some way off and sprinkle about a gallon. To shew that it seeks such a soil they offer the following proof; wherever date-palms grow abundantly, the soil is salt, both in Babylon, they say, where the

tree is indigenous, in Libya in Egypt and in Phoenicia; while in Coele-Syria, where are most palms, only in three districts, they say, where the soil is salt, are dates produced which can be stored; those that grow in other districts do not keep, but rot, though when fresh they are sweet and men use them at that stage.

[6.3] The tree is likewise very fond of irrigation; as to dung there is a difference of opinion: some say that the date-palm does not like it, but that it is most injurious, others that it gladly accepts it and makes good growth thereby, but plenty of water should be given, after manuring, as the Rhodians use. This then is matter for enquiry; it may be that there are two distinct methods of cultivation, and that dung, if accompanied by watering, is beneficial, though without it it is harmful. — When the tree is a year old, they transplant it and give plenty of salt, and this treatment is repeated when it is two years old, for it delights greatly in being transplanted.

[6.4] Most transplant in the spring, but the people of Babylon about the rising of the dog-star, and this is the time when most people propagate it, since it then germinates and grows more quickly. As long as it is young, they do not touch it, except that they tie up the foliage, so that it may grow straight and the slender branches may not hang down. At a later stage they prune it, when it is more vigorous and has become a stout tree, leaving the slender branches only about a handsbreadth long. So long as it is young, it produces its fruit without a stone, but later on the fruit has a stone.

[6.5] However some say that the people of Syria use no cultivation, except cutting out wood and watering, also that the date-palm requires spring water rather than water from the skies; and that such water is abundant in the valley in which are the palm-groves. And they add that the Syrians say that this valley extends through Arabia to the Red Sea, and that many profess to have visited it, and that it is in the lowest part of it that the date-palms grow. Now both accounts may be true, for it is not strange that in different soils the methods of cultivation should differ, like the trees themselves.

[6.6] There are several kinds of palm. To begin with, to take first the most important difference; — some are fruitful and some not; and it is from this latter kind that the people of Babylon make their beds and other furniture. Again of the fruitful trees some are ‘male,’ others ‘female’; and these differ from one another in that the ‘male’ first bears a flower on the spathe, while

the 'female' at once bears a small fruit. Again there are various differences in the fruits themselves; some have no stones, others soft stones; as to colour, some are white, some black, some yellow; and in general they say that there is not less variety of colour and even of kind than in figs; also that they differ in size and shape, some being round like apples and of such a size that four of them make up a cubit in length, ... while others are small, no bigger than chick-peas; and that there is also much difference in flavour.

[6.7] The best kind alike in size and in quality, whether of the white or black variety, is that which in either form is called the royal palm ' ; but this, they say, is rare; it grows hardly anywhere except in the park of the ancient Bagoas, near Babylon. In Cyprus there is a peculiar kind of palm which does not ripen its fruit, though, when it is unripe, it is very sweet and luscious, and this lusciousness is of a peculiar kind. Some palms again differ not merely in their fruits but in the character of the tree itself as to stature and general shape; for instead of being large and tall they are low growing; but these are more fruitful than the others, and they begin to bear as soon as they are three years old; this kind too is common in Cyprus. Again in Syria and Egypt there are palms which bear when they are four or five years old, at which age they are the height of a man.

[6.8] There is yet another kind in Cyprus, which has broader leaves and a much larger fruit of peculiar shape; in size it is as large as a pomegranate, in shape it is long; it is not however juicy like others, but like a pomegranate, so that men do not swallow it, but chew it and then spit it out. Thus, as has been said, there are many kinds. The only dates that will keep, they say, are those which grow in the Valley of Syria, while those that grow in Egypt Cyprus and elsewhere are used when fresh.

[6.9] The palm, speaking generally, has a single and simple stem; however there are some with two stems, as in Egypt, which make a fork, as it were; the length of the stem up to the point where it divides is as much as five cubits, and the two branches of the fork are about equal in length. They say that the palms in Crete more often than not have this double stem, and that some of them have three stems; and that in Lapaia one with five heads has been known. It is after all not surprising that in more fertile soils such instances should be commoner, and in general that more kinds and more variation should be found under such conditions. There is another kind which is said to

be abundant in Ethiopia, called the doum-palm; this is a shrubby tree, not having a single stem but several, which sometimes are joined together up to a certain point; and the leaf-stalks are not long, only the length of a cubit, but they are plain, and the leafage is borne only at the tip. The leaf is broad and, as it were, made up of at least two leaflets. This tree is fair to look upon, and its fruit in shape size and flavour differs from the date, being rounder larger and pleasanter to the taste, though not so luscious. It ripens in three years, so that there is always fruit on the tree, as the new fruit overtakes that of last year. And they make bread out of it. These reports then call for enquiry.

[6.10] The dwarf-palm, as it is called, is a distinct kind, having nothing but its name in common with other palms. For if the head is removed, it survives, and, if it is cut down, it shoots again from the roots. It differs too in the fruit and leaves; for the leaf is broad and flexible, and so they weave their baskets and mats out of it. It is common in Crete and still more so in Sicily. However in these matters we have said more than our purpose required.

[6.11] To return to the other trees: — in propagating them they set the cuttings upside down, as with vine-shoots. Some however say that that makes no difference, and least of all in propagating the vine; while others contend that the pomegranate thus propagated has a bushier growth and shades the fruit better, and also that it is then less apt to shed the flower. This also occurs, they say, with the fig; when it is set upside down, it does not shed its fruit, and it makes a more accessible tree; and it does not shed its fruit, even if one breaks off the top as it begins to grow.

[6.12] Thus we have given a general sketch of what we find about methods of propagation, and of the ways in which these trees are reproduced.

[7.1] As to cultivation and tendance some requirements apply equally to all trees, some are peculiar to one. Those which apply equally to all are spadework watering and manuring, and moreover pruning and removal of dead wood. But different trees differ in the degree. Some love moisture and manure, some not so much, as the cypress, which is fond neither of manure nor of water, but actually dies, they say, if it is overwatered when young. But the pomegranate and vine are water-loving. The fig grows more vigorously if it is watered, but then its fruit is inferior, except in the case of the Laconian variety, which is water-loving.

[7.2] All trees require pruning; for they are improved by removal of the dead

wood, which is, as it were, a foreign body, and prevents growth and nourishment. Wherefore when the (tree) — becomes old, they cut off all its boughs: for then the tree breaks afresh. Androtion says that the myrtle and olive need more pruning than any other trees; for the smaller you leave them, the better they will grow, and they will bear better fruit. But the vine of course needs pruning even more; for it is in the case of this tree more necessary for promoting both growth and fruitfulness. However, speaking generally, both this and other kinds of tendance must be suited to the particular natural character in each case.

[7.3] Androtion further says that the olive the myrtle and the pomegranate require the most pungent manure and the heaviest watering, as well as the most thorough pruning, for that then they do not get ‘softwood’ nor any disease underground; but when the tree is old, he adds, one should cut off the boughs, and then attend to the stem as though it were a tree just planted. Thus treated they say that the myrtle and olive are longer lived and very’ robust. These statements might be a subject

[7.4] for further enquiry, or, if not all of them, at least what is stated of the ‘softwood.’

[7.5] Manure does not suit all alike, nor is the same manure equally good for all. Some need it pungent, some less so, some need it quite light. The most pungent is human dung: thus Chartodras says that this is the best, pig-manure being second to it, goat-manure third, fourth that of sheep, fifth that of oxen, and sixth that of beasts of burden. Litter manure is of different kinds and is applied in various ways: some kinds are weaker, some stronger.

[7.6] Spade-work is held to be beneficial to all trees, and also hoeing for the smaller ones, as they then become more vigorous. Even dust is thought to fertilise some things and make them flourish, for instance the grape; wherefore they often put dust to the roots of the vine. Some also dig in dust about the figs in places where it is deficient. In Megara, when the etesian winds are past, they cover the cucumber and gourd plants with dust by raking, and so make the fruits sweeter and tenderer by not watering. On this point there is general agreement. But some say that dust should not be put to the vine, and that it should not be meddled with at all when the grape is turning, or, if at all, only when it has turned black. Some again say that even then nothing should be done except to pluck up the weeds. So on this point there is

a difference of opinion.

[7.7] If a tree does not bear fruit but inclines to a leafy growth, they split that part of the stem which is underground and insert a stone corresponding to the crack thus made, and then, they say, it will bear. The same result follows, if one cuts off some of the roots, and accordingly they thus treat the surface roots of the vine when it runs to leaf. In the case of figs, in addition to root-pruning, they also sprinkle ashes about the tree, and make gashes in the stems, and then, they say, it bears better. Into the almond tree they drive an iron peg, and, having thus made a hole, insert in its place a peg of oak-wood and bury it in the earth, and some call this 'punishing' the tree, since its luxuriance is thus chastened.

[7.8] Some do the same with the pear and with other trees. In Arcadia they have a similar process which is called 'correcting' the sorb (for that tree is common in that country). And they say that under this treatment those trees that would not bear do so, and those that would not ripen their fruit now ripen them well. It is also said that the almond becomes sweet, instead of bitter, if one digs round the stem and, having bored a hole about a palmsbreadth, allows the gum which exudes from all sides to flow down into it and collect. The object of this would be alike to make the tree bear and to improve the fruit.

[8.1] Trees which are apt to shed their fruit before ripening it are almond, apple, pomegranate, pear and, above all, fig and date-palm; and men try to find the suitable remedies for this. This is the reason for the process called 'caprification'; gall insects come out of the wild figs which are hanging there, eat the tops of the cultivated figs and so make them swell. The shedding of the fruit differs according to the soil: in Italy they say that it does not occur, and so they do not use caprification, nor is it practised in places which face north nor in those with light soils, as at Phalykos in the Megarid, nor in certain parts of the district of Corinth. Also conditions as to wind make a difference; the fruit is shed more with northerly than with southerly winds, and this also happens more if the winds are cold and frequent.- Moreover the character of the tree itself makes a difference; for some kinds, such as the Laconian and other such kinds, shed their early figs but not the later ones. Wherefore caprification is not practised with these. Such are the changes to which the fig is subject in respect of locality kind and climatic conditions.

[8.2] Now the gall-insects come, as has been said, out of the wild fig, and they are engendered from the seeds. The proof given of this is that, when they come out, there are no seeds left in the fruit; and most of them in coming out leave a leg or a wing behind. There is another kind of gall-insect which is called kentrines; these insects are sluggish, like drones, they kill those of the other kind who are entering the figs, and they themselves die in the fruit. The black kind of wild fig which grows in rocky places is most commended for caprification, as these figs contain numerous seeds.

[8.3] A fig which has been subject to caprification is known by being red and parti-coloured and stout, while one which has not been so treated is pale and sickly. The treatment is applied to the trees which need it, after rain. The wild figs are most plentiful and most potent where there is most dust. And they say that hulwort also, when it fruits freely, and the ‘gallbags’ of the elm are used for caprification. For certain little creatures are engendered in these also. When the knips is found in figs, it eats the gall-insects. It is to prevent this, it is said, that they nail up the crabs; for the knips then turns its attention to these. Such are the ways of assisting the fig trees.

[8.4] With dates it is helpful to bring the male to the female; for it is the male which causes the fruit to persist and ripen, and this process some call, by analogy, ‘the use of the wild fruit.’ The process is thus performed: when the male palm is in flower, they at once cut off the spathe on which the flower is, just as it is, and shake the bloom with the flower and the dust over the fruit of the female, and, if this is done to it, it retains the fruit and does not shed it. In the case both of the fig and of the date it appears that the ‘male’ renders aid to the ‘female,’ — for the fruit-bearing tree is called ‘female’ — but while in the latter case there is a union of the two sexes, in the former the result is brought about somewhat differently.

BOOK III. OF WILD TREES.

[1.1] Now that we have spoken of cultivated trees, we must in like manner speak of wild ones, noting in what respects they agree with or differ from cultivated trees, and whether in any respects their character is altogether peculiar to themselves.

[1.2] Now the ways in which they come into being are fairly simple; they all grow either from seed or from a root. But the reason of this is not that they could not possibly grow in any other way, but merely perhaps that no one even tries to plant them otherwise; whereas they might grow from slips, if they were provided with a suitable position and received the fitting kind of tendance, as may be said even now of the trees of woodland and marsh, such as plane willow abele black poplar and elm; all these and other similar trees grow very quickly and well when they are planted from pieces torn off, so that they survive, even if at the time of shifting they are already tall and as big as trees. Most of these are simply planted by being set firmly, for instance, the abele and the black poplar.

[1.3] Such is the way in which these originate as well as from seed or from roots; the others grow only in these two ways — while some of them, such as silver-fir, fir, and Aleppo pine grow only from seed. All those that have seed and fruit, even if they grow from a root, will grow from seed too; for they say that even those which, like elm and willow, appear to have no fruit reproduce themselves. For proof they give the fact that many such trees come up at a distance from the roots of the original tree, whatever the position may be; and further, they have observed a thing which occasionally happens; for instance, when at Pheneos in Arcadia the water which had collected in the plain since the underground channels were blocked burst forth, where there were willows growing near the inundated region, the next year after it had dried up they say that willows grew again; and where there had been elms, elms grew, even as, where there had been firs and silverfirs, these trees reappeared — as if the former trees followed the example of the latter.

[1.4] But the willow is said to shed its fruit early, before it is completely matured and ripened; and so the poet not unfittingly calls it the willow which loses its fruit.

[1.5] That the elm also reproduces itself the following is taken to be a proof:

when the fruit is carried by the winds to neighbouring spots, they say that young trees grow from it. Something similar to this appears to be what happens in the case of certain under-shrubs and herbaceous plants; though they have no visible seed, but some of them only a sort of down, and others only a flower, such as thyme, young plants nevertheless grow from these. As for the plane, it obviously has seeds, and seedlings grow from them. This is evident in various ways, and here is a very strong proof — a plane-tree has before now been seen which came up in a brass pot.

[1.6] Such we must suppose are the ways in which wild trees originate, apart from the spontaneous ways of which natural philosophers tell. Anaxagoras says that the air contains the seeds of all things, and that these, carried down by the rain, produce the plants; while Diogenes says that this happens when water decomposes and mixes in some sort with earth. Kleidemos maintains that plants are made of the same elements as animals, but that they fall short of being animals in proportion as their composition is less pure and as they are colder. And there are other philosophers also who speak of spontaneous generation.

[1.7] But this kind of generation is somehow beyond the ken of our senses. There are other admitted and observable kinds, as when a river in flood gets over its banks or has altogether changed its course, even as the Nesos in the district of Abdera often alters its course, and in so doing causes such a growth of forest in that region that by the third year it casts a thick shade. The same result ensues when heavy rains prevail for a long time; during these too many plants shoot up. Now, as the flooding of a river, it would appear, conveys seeds of fruits of trees, and, as they say, irrigation channels convey the seeds of herbaceous plants, so heavy rain acts in the same way; for it brings down many of the seeds with it, and at the same time causes a sort of decomposition of the earth and of the water. In fact, the mere mixture of earth with water in Egypt seems to produce a kind of vegetation. And in some places, if the ground is merely lightly worked and stirred, the plants native to the district immediately spring up; for instance, the cypress in Crete. And something similar to this occurs even in smaller plants; as soon as the earth is stirred, wherever it may be, a sort of vegetation comes up. And in partly saturated soil, if you break up the ground, they say that caltrop appears. Now these ways of origination are due to the change which takes place in the soil,

whether there were seeds in it already, or whether the soil itself somehow produces the result. And the latter explanation is perhaps not strange, seeing that the moist element is also locked up in the soil. Again, in some places they say that after rain a more singular abundance of vegetation has been known to spring up; for instance, at Cyrene, after a heavy pitchy shower had fallen: for it was under these circumstances that there sprang up the wood which is near the town, though till then it did not exist. They say also that silphium has been known to appear from some such cause, where there was none before. Such are the ways in which these kinds of generation come about.

[2.1] All trees are either fruit-bearing or without fruit, either evergreen or deciduous, either flowering or flowerless; for certain distinctions apply to all trees alike, whether cultivated or wild. To wild trees, as compared with cultivated ones, belong the special properties of fruiting late, of greater vigour, of abundance of fruit, produced if not matured; for they ripen their fruit later, and in general their time of flowering and making growth is later; also they are more vigorous in growth, and so, though they produce more fruit, they ripen it less; if this is not universally true, at least it holds good of the wild olive and pear as compared with the cultivated forms of these trees. This is generally true with few exceptions, as in the cornelian cherry and sorb; for the wild forms of these, they say, ripen their fruit better, and it is sweeter than in the cultivated forms. And the rule also does not hold good of anything which does not admit of cultivation, whether it be a tree or one of the smaller plants, as silphium caper and, among leguminous plants, the lupin; these one might say are specially wild in their character. For, as with animals which do not submit to domestication, so a plant which does not submit to cultivation may be called wild in its essential character. However Hippon declares that of every plant there exists both a cultivated and a wild form, and that ‘cultivated’ simply means that the plant has received attention, while ‘wild’ means that it has not; but though he is partly right, he is partly wrong. It is true that any plant deteriorates by neglect and so becomes wild; but it is not true that every plant may be improved by attention, as has been said. Wherefore we must make our distinction and call some things wild, others cultivated — the latter class corresponding to those animals which live with man and can be tamed.

[2.2] But perhaps it does not matter which way this should be put. Any tree which runs wild deteriorates in its fruits, and itself becomes dwarfed in leaves

branches bark and appearance generally; for under cultivation these parts, as well as the whole growth of the tree, become closer, more compact and harder; which indicates that the difference between cultivated and wild is chiefly shown in these respects. And so those trees which show these characteristics under cultivation they say are really wild, for instance fir cypress, or at least the 'male' kind, hazel and chestnut.

[2.3] Moreover these wild forms are distinguished by having greater liking for cold and for hilly country: for that too is regarded as a means of recognising wild trees and wild plants generally, whether it is so regarded in itself or as being only incidentally a distinguishing mark.

[2.4] So the definition of wild kinds, whether it should be thus made or otherwise, perhaps makes no difference for our present purpose. But it is certainly true, speaking broadly and generally, that the wild trees are more to be found in hilly country, and that the greater part of them flourish more in such regions, with the exception of those which love water or grow by river sides or in woods; these and such-like trees are rather trees of the plain. However on great mountains, such as Parnassus, Cyllene, the Pierian Olympus and the Mysian Olympus, and such regions anywhere else, all kinds grow, because of the diversity of positions afforded them. For such mountains offer positions which are marshy, wet, dry, deep-soiled or rocky; they have also their meadow land here and there, and in fact almost every variety of soil; again they present positions which lie low and are sheltered, as well as others which are lofty and exposed to wind; so that they can bear all sorts, even those which belong to the plains.

[2.5] Yet it is not strange that there should be some mountains which do not thus bear all things, but have a more special kind of vegetation to a great extent if not entirely; for instance the range of Ida in Crete; for there the cypress grows; or the hills of Cilicia and Syria, on which the Syrian cedar grows, or certain parts of Syria, where the terebinth grows. For it is the differences of soil which give a special character to the vegetation. However the word 'special' is used here in a somewhat extended sense.)

[3.1] The following trees are peculiar to mountain country and do not grow in the plains; let us take Macedonia as an example. Silver-fir, fir, 'wild pine,' lime, zygia, Valonia oak, box, andrachne, yew, Phoenician cedar, terebinth, wild fig, alaternus, hybrid arbutus, hazel, chestnut, kermes-oak. The following

grow also in the plain: tamarisk, elm, abele, willow, black poplar, cornelian cherry, cornel, alder, oak, lakare (bird-cherry), wild pear, apple, hop-hornbeam, holly, manna-ash, Christ's thorn, cotoneaster, maple, which when it grows in the mountains, is called *zygia*, when in the plain, *gleinos*: others however, classify differently and make maple and *zygia* distinct trees.

[3.2] All those trees which are common to both hill and plain are taller and finer in appearance when they grow in the plain; but the mountain forms are better as to producing serviceable timber and fruits, with the exception of wild pear, pear, and apple; these are in the plain better in fruit and also in timber; for in the hills they grow small with many knots and much spinous wood. But even on the mountains all trees grow fairer and are more vigorous when they have secured a suitable position; and, to speak generally, those which grow on the level parts of the mountains are specially fair and vigorous; next to these come those which grow on the lower parts and in the hollows; while those that grow on the heights are of the poorest quality, except any that are naturally cold-loving. But even these shew some variation in different positions, of which we must speak later; for the present we must in our distinctions in each case take account only of the differences already mentioned.

[3.3] Now among wild trees those are evergreen which were mentioned before, silver-fir, fir, 'wild pine,' box, andrachne, yew, Phoenician cedar, terebinth, alaternus, hybrid arbutus, bay, phellodrys' (holm-oak), holly, cotoneaster, kermes-oak, tamarisk; but all the others shed their leaves, unless it be that in certain places they keep them exceptionally, as was said of the plane and oak in Crete and in any other place which is altogether favourable to luxuriant growth.

[3.4] Most trees are fruit-bearing, but about willow, black poplar, and elm men hold different opinions, as was said; and some, as the Arcadians, say that only the black poplar is without fruit, but that all the other mountain trees bear fruit. However in Crete there are a number of black poplars which bear fruit; there is one at the mouth of the Idaean cave, in which the dedicatory offerings are hung, and there is another small one not far off, and there are quite a number about a spring called the Lizard's Spring about twelve furlongs off. There are also some in the hill-country of Ida in the district called Kindria, and in the mountains about Praisia. Others again, as the Macedonians, say that the elm is the only tree of this class which bears fruit.

[3.5] Again the character of the position makes a great difference as to fruit-bearing, as in the case of the persea and the date-palm. The persea of Egypt bears fruit, and so it does wherever it grows in the neighbouring districts, but in Rhodes it only gets as far as flowering. The date-palm in the neighbourhood of Babylon is marvellously fruitful; in Hellas it does not even ripen its fruit, and in some places it does not even produce any.

[3.6] The same may be said of various other trees: in fact even of smaller herbaceous plants and bushes some are fruitful, others not, although the latter are growing in the same place as the former, or quite near it. Take for instance the centaury in Elea; where it grows in hill-country, it is fruitful; where it grows in the plain, it bears no fruit, but only flowers; and where it grows in deep valleys, it does not even flower, unless it be scantily. Any way it appears that, even of other plants which are of the same kind and all go by the same name, one will be without fruit, while another bears fruit; for instance, one kermes-oak will be fruitful, another not; and the same is true of the alder, though both produce flowers. And, generally speaking, all those of any given kind which are called 'male' trees are without fruit, and that though some of these, they say, produce many flowers, some few, some none at all. On the other hand they say that in some cases it is only the 'males' that bear fruit, but that, in spite of this, the trees grow from the flowers, (just as in the case of fruit-bearing trees they grow from the fruit). And they add that in both cases, the crop of seedlings which comes up is sometimes so thick that the woodmen cannot get through except by clearing a way.

[3.7] There is also a doubt about the flower of some trees, as we said. Some think that the oak bears flowers, and also the filbert, the chestnut, and even the fir and Aleppo pine; some however think that none of these has a flower, but that, — resembling and corresponding to the wild figs which drop off prematurely, we have in the nuts the catkin, in the oak the oak-moss, in the pine the 'flowering tuft'. The people of Macedonia say that these trees also produce no flowers — Phoenician cedar, beech, aria (holm-oak), maple. Others distinguish two kinds of Phoenician cedar, of which one bears flowers but bears no fruit, while the other, though it has no flower, bears a fruit which shows itself at once — just as wild figs produce their abortive fruit. However that may be, it is a fact that this is the only tree which keeps its fruit for two years. These matters then need enquiry.

[4.1] Now the budding of wild trees occurs in some cases at the same time as that of the cultivated forms, but in some cases somewhat, and in some a good deal later; but in all cases it is during the spring season. But there is greater diversity in the time of fruiting; as we said before, the times of ripening do not correspond to those of budding, but there are wide differences. For even in the case of those trees which are somewhat late in fruiting, — which some say take a year to ripen their fruit — such as Phoenician cedar and kermes-oak, the budding nevertheless takes place in the spring. Again there are differences of time between individual trees of the same kind, according to the locality; those in the marshes bud earliest, as the Macedonians Siyy, second to them those in the plains, and latest those in the mountains.

[4.2] Again of particular trees some wild ones bud along with the cultivated forms, as andrachne and hybrid arbutus; and the wild pear is a little later than the cultivated. Some again bud both before zephyr begins to blow, and immediately after it has been blowing. Before it come cornelian cherry and cornel, after it bay and alder; a little before the spring equinox come lime zygia Valonia oak fig. Hazel oak and elder are also early in budding, and still more those trees which seem to have no fruit and to grow in groves, 'abele elm willow black poplar; and the plane is a little later than these. The others which bud when the spring is, as it were, becoming established, are such as wild fig alaternus cotoneaster Christ's thorn terebinth hazel chestnut. The apple is late in budding, latest of all generally are ipsos (cork-oak) aria (holm-oak) tetragonia odorous cedar yew. Such are the times of budding. The flowering times in general follow in proportion; but they present some irregularity, and so in still more cases and to a greater extent do the times at which the fruit is matured. The cornelian cherry produces its fruit about the summer solstice; the early kind, that is to say, and this tree is about the earliest of all. The late form, which some call 'female cornelian cherry' (cornel), fruits quite at the end of autumn. The fruit of this kind is inedible and its wood is weak and spongy; that is what the difference between the two kinds amounts to. The terebinth produces its fruit about the time of wheat-harvest or a little later, manna-ash and maple in summer; alder, hazel, and a certain kind of wild pear in autumn; oak and chestnut later still, about the setting of the Pleiad; and in like manner alaternus, kermes-oak, Christ's-thorn, cotoneaster, after the setting of the Pleiad; aria (holm-oak) when winter is beginning, apple

with the first cold weather, wild pear late — in winter. Andrachne and hybrid arbutus first ripen their fruit when the grape is turning, and again when winter is beginning; for these trees appear to bear twice. As for silver-fir and yew, they flower a little before the solstice; (the flower of the silverfir is yellow and otherwise pretty); they bear their fruit after the setting of the Pleiad. Fir and Aleppo pine are a little earlier in budding, about fifteen days, but produce their fruit after the setting of the Pleiad, though proportionately earlier than silver-fir and yew.

[4.3] In these trees then the difference of time is not considerable; the greatest difference is shewn in Phoenician cedar holly and kermes-oak; for Phoenician cedar appears to keep its fruit for a year, the new fruit overtaking that of last year; and, according to some, it does not ripen it at all; wherefore men gather it unripe and keep it, whereas if it is left on the tree, it shrivels up. The Arcadians say that the kermes-oak also takes a year to perfect its fruit; for it ripens last year's fruit at the same time that the new fruit appears on it; the result of which is that such trees always have fruit on them. They say also that holly loses its fruit owing to the winter. Lime and box are very late in fruiting, (lime has a fruit which no animal can eat, and so have cornel and box. Ivy, Phoenician cedar, fir, and andrachne are late fruiting) though, according to the Arcadians, still later than these and almost latest of all are tetragonia, odorous cedar and yew. Such then are the differences as to the time of shedding and ripening their fruit between wild as compared with cultivated trees, and likewise as compared with one another.

[5.1] Now most trees, when they have once begun to bud, make their budding and their growth continuously, but with fir silver-fir and oak there are intervals. They make three fresh starts in growth and produce three separate sets of buds; wherefore also they lose their bark thrice a year. For every tree loses its bark when it is budding. This first happens in mid-spring at the very beginning of the month Thargelion,⁸ on Mount Ida within about fifteen days of that time; later, after an interval of about thirty days or rather more, the tree puts on fresh buds which start from the head of the knobby growth which formed at the first budding-time; and it makes its budding partly on the top of this, partly all round it laterally, - using the knob formed at the first budding as a sort of joint, just as in the case of the first budding. This happens about the end of the month Skirrophorion.

[5.2] (It is only at the time of this second budding that the galls also are produced, both the white and the black; the liquid forming them is mostly produced in quantity at night, and, after swelling for one day — except the part which is of resinous character — it hardens if it is caught by the heat, and so cannot grow any more; otherwise it would have grown greater in bulk; wherefore in some trees the formation is not larger than a bean. The black gall is for several days of a pale green colour; then it swells and sometimes attains the size of an apple.)

[5.3] Then, after an interval of about fifteen days, the tree for the third time puts on buds in the month Hekatombaion; but this growth continues for fewer days than on either of the previous occasions, perhaps for six or seven at most. However the formation of the buds is as before and takes place in the same manner. After this period there is no increase in length, but the only increase is in thickness.

[5.4] The periods of budding can be seen in all trees, but especially in fir and silver-fir, because the joints of these are in a regular series and have the knots at even distances. It is then the season also for cutting the timber, because the bark is being shed; for at other times the bark is not easy to strip off, and moreover, if it is stripped off, the wood turns black and is inferior in appearance; for as to its utility this makes no difference, though the wood is stronger if it is cut after the ripening of the fruit.

[5.5] Now what has been said is peculiar to the above-mentioned trees. But the buddings which take place at the rising of the dog-star and at that of Arcturus after the spring budding are common to nearly all, though they may be most clearly seen in cultivated trees, and, among these, especially in fig, vine, pomegranate, and in general in all those that are luxuriant in growth or are growing in rich soil. Accordingly they say that the budding at the rising of Arcturus is most considerable in Thessaly and Macedonia; for it also happens that the autumn in these countries is a fair and a long season; so that the mildness of the climate also contributes. Indeed it is for this reason, one may say, that in Egypt too the trees are always budding, or at least that the process is only suspended for quite a short time.

[5.6] Now the facts as to the later buddings apply, as has been said, to all trees alike; but those which belong to the intervals after the first period of budding are peculiar to those mentioned above. Peculiar to some also is the

growth of what are called winter buds,' for instance in the abovementioned trees; silver-fir, fir, and oak have them, and also lime, hazel, chestnut, and Aleppo pine. These are found in the oak before the leaf-buds grow, when the spring season is just beginning. This growth consists of a sort of leaf-like formation, which occurs between the first swelling of the leaf-buds and the time when they burst into leaf. In the sorb it occurs in the autumn after the shedding of the leaves, and has from the first a glistening look,' as though swelling had taken place, just as if it were about to burst into leaves; and it persists through the winter till the spring. The filbert after casting its fruit produces its clustering growth, which is as large as a good-sized grub: several of these grow from one stalk, and some call them catkins. Each of these is made up of small processes arranged like scales, and resembles the cone of the fir, so that its appearance is not unlike that of a young green fir-cone, except that it is longer and almost of the same thickness throughout. This grows through the winter (when spring comes, the scale-like processes open and turn yellow); it grows to the length of three fingers, but, when in spring the leaves are shooting, it falls off, and the cup-like fruit-cases of the nut are formed, closed all down the stalk and coiresponding in number to the flowers; and in each of these is a single nut. The case of the lime and of any other tree that produces winter-buds needs further consideration.

[6.1] Some trees are quick-growing, some slow. Quick-growing are those which grow by the waterside, as elm, plane, abele, black poplar, willow; (however some dispute about the last-named, and consider it a slow grower) and of fruit-bearing trees, silver-fir, fir, oak. Quickest growing of all are . . . yew lakara (bird-cherry) Valonia oak, Phoenician cedar, maple, hop-hornbeam, zygia, manna-ash, alder, Aleppo pine, andrachne, cornelian cherry, box, wild pear. But silver-fir, fir and Aleppo pine bear fruit from the very first, whatever size they have attained.

[6.2] While the growth and budding of most trees are irregular as regards the position in which the buds appear, the growth and budding of the silver-fir follow a regular rule, and its development afterwards is also in a regular sequence. For, when the trunk first divides, then again from the divided trunk the second division takes place in like manner, and so the tree goes on with each fresh formation of buds. In other trees not even the knots are opposite to one another, except in some few cases, as wild olive and others.' Here too we

find a difference in the manner of growth which belongs to all trees alike, both cultivated and wild: in some cases the growth is from the top of the shoots and also from the sidebuds,' as in pear pomegranate fig myrtle and the majority of trees, one may say: in some cases the growth is not from the top, but only from the sidebuds, and the already existing part is pushed out further, as is the whole trunk with the upper branches. This occurs in the walnut and in the filbert as well as in other trees. In all such trees the buds end in a single leaf; wherefore it is reasonable that they should not make fresh buds and growth from this point, as they have no point of departure. (To a certain extent the growth of corn is similar; for it also regularly increases by pushing forward of the already existing part, even if the leaves are mutilated, as in corn which is bitten down by animals. Corn however does not make side-growths, as some leguminous plants do.) Here then we may find a difference which occurs both in the making of buds and in the making of fresh growth.

[6.3] Some say that wild trees are not deep rooting, because they all grow from seed; but this is not a very accurate statement. For it is possible that, when they are well established, they may send their roots down far; in fact even most pot-herbs do this, though these are not so strong as trees, and are undoubtedly grown from seed planted in the ground. The kermes-oak however seems to be the deepest rooting of wild trees; silver-fir and fir are only moderately so, and shallowest are joint-fir plum bullace (which is a sort of wild plum). The last two also have few roots, while joint-fir has many. Trees which do not root deep, and especially silverfir and fir, are liable to be rooted up by winds.

[6.4] So the Arcadians say. But the people who live near Mount Ida say that the silver fir is deeper rooting than the oak, and has straighter roots, though they are fewer. Also that those which have the deepest roots are plum and filbert, the latter having strong slender roots, the former having many: but they add that both trees must be well established to acquire these characters; also that plum is very tenacious of life. Maple, they say, has shallow roots and few of them; but manna-ash has more and they are thickly matted and run deep. Phoenician cedar and prickly cedar, they say, have shallow roots, those of alder are slender and 'plain,' — as also are those of beech; for this too has few roots, and they are near the surface. Sorb, they say, has its roots near the surface, but they are strong and thick and hard to kill, though not very

numerous. Such are the trees which are or are not deep-rooting.

[7.1] Almost all trees shoot from the side if the trunk is cut down, unless the roots have previously been injured; but fir and silver-fir wither away completely from the roots within the year, if merely the top has been cut off. And there is a peculiar thing about the silver-fir; when it is topped or broken off short by wind or some other cause affecting the smooth part of the trunk — for up to a certain height the trunk is smooth knotless and plain (and so suitable for making a ship's mast), — a certain amount of new growth forms round it, which does not however grow much vertically: and this is called by some *amphauxis* and by others *amphiphya*; it is black in colour and exceedingly hard, and the Arcadians make their mixing-bowls out of it; the thickness is in proportion to the tree, according as that is more or less vigorous and sappy, or again according to its thickness. There is this peculiarity too in the silver-fir in the same connexion; when, after taking off all the branches, one cuts off the top, it soon dies; yet, when one takes off the lower parts, those about the smooth portion of the trunk, what is left survives, and it is on this part that the *amphauxis* forms. And plainly the reason why the tree survives is that it is sappy and green because it has no side-growths. Now this is peculiar to the silver-fir.

[7.2] Now, while other trees bear merely their own fruit and the obvious parts which form annually, to wit, leaf, flower and bud, some bear also catkins or tendrils, and some produce other things as well, for instance the elm its 'cluster' and the familiar baglike thing, the fig both the immature figs which drop off and (in some kinds) the untimely figs — though perhaps in a sense these should be reckoned as fruit. Again *filbert* produces its catkin, *kermes-oak* its scarlet 'berry,' and bay its 'cluster.' The fruit-bearing sort of bay also produces this, or at all events one kind certainly does so; however the sterile kind, which some call the 'male,' produces it in greater quantity. The fir again bears its 'tuft,' which drops off.

[7.3] The oak however bears more things besides its fruit than any other tree; as the small gall and its other black resinous gall. Again it has another growth, like a mulberry in shape, but hard and difficult to break; this however is not common. It has also another growth like the penis in shape, which, when it is further developed, makes a hard prominence and has a hole through it. This to a certain extent resembles also a bull's head, but, when split open, it contains

inside a thing shaped like the stone of an olive.’ The oak also produces what some call the ‘ball’; this is a soft woolly spherical object enclosing a small stone which is harder,’ and men use it for their lamps; for it burns well, as does the black gall. The oak also produces another hairy ball, which is generally useless, but in the spring season it is covered with a juice which is like honey both to touch and taste.

[7.4] Further the oak produces right inside the axil of the branches another ball with no stalk or else a hollow one; this is peculiar and of various colours: for the knobs which arise on it are whitish or black and spotted, while the part between these is brilliant scarlet; but, when it is opened, it is black and rotten. It also occasionally produces a small stone which more or less resembles pumice-stone; also, less commonly, there is a leaf-like ball, which is oblong and of close texture. Further the oak produces on the rib of the leaf a white transparent ball, which is watery, when it is young; and this sometimes contains flies: but as it develops, it becomes hard, like a small smooth gall.

[7.5] Such are the growths which the oak produces as well as its fruit. For as for the fungi which grow from the roots or beside them, these occur also in other trees. So too with the oak-mistletoe; for this grows on other trees also. However, apart from that, the oak, as was said, produces more things than any other tree; and all the more so if, as Hesiod says, it produces honey and even bees; however, the truth appears to be that this honey-like juice comes from the air and settles on this more than on other trees. They say also that, when the oak is burnt, nitre is produced from it. Such are the things peculiar to the oak.

[8.1] Taking, as was said, all trees according to their kinds, we find a number of differences. Common to them all is that by which men distinguish the ‘male’ and the ‘female,’ the latter being fruitbearing, the former barren in some kinds. In those kinds in which both forms are fruit-bearing the ‘female’ has fairer and more abundant fruit; however some call these the ‘male’ trees — for there are those who actually thus invert the names. This difference is of the same character as that which distinguishes the cultivated from the wild tree, while other differences distinguish different forms of the same kind; and these we must discuss, at the same time indicating the peculiar forms, where these are not obvious and easy to recognise.

[8.2] Take then the various kinds of oak; for in this tree men recognise more

differences than in any other. Some simply speak of a cultivated and a wild kind, not recognising any distinction made by the sweetness of the fruit; (for sweetest is that of the kind called Valonia oak, and this they make the wild kind), but distinguishing the cultivated kind by its growing more commonly on tilled land and having smoother timber, while the Valonia oak has rough wood and grows in mountain districts. Thus some make four kinds, others five. They also in some cases vary as to the names assigned; thus the kind which bears sweet fruit is called by some *hemeris*, by others ‘true oak.’ So too with other kinds. However, to take the classification given by the people of Mount Ida, these are the kinds: *hemeris* (gall-oak), *aigilops* (Turkey-oak), ‘broad-leaved’ oak (scrub oak), Valonia oak, sea-bark oak, which some call ‘straight-barked’ oak. All these bear fruit; but the fruits of Valonia oak are the sweetest, as has been said; second to these those of *hemeris* (gall-oak), third those of the ‘broad-leaved’ oak (scrub oak), fourth sea-bark oak, and last *aigilops* (Turkey oak), whose fruits are very bitter. However the fruit is not always sweet in the kinds specified as such; sometimes it is bitter, that of the Valonia oak for instance. There are also differences in the size shape and colour of the acorns. Those of Valonia oak and sea-bark oak are peculiar; in both of these kinds on what are called the ‘male’ trees the acorns become stony at one end or the other; in one kind this hardening takes place in the end which is attached to the cup, in the other in the flesh itself. Wherefore, when the cups are taken off, we find a cavity like the visceral cavities in animals.

[8.3] There are also differences in leaves trunk timber and general appearance. *Hemeris* (gall-oak) is not straight-growing nor smooth nor tall, for its growth is very leafy and twisted, with many side-branches, so that it makes a low much-branched tree: its timber is strong, but not so strong as that of the Valonia oak, for that is the strongest and the least liable to rot. This kind too is not straight-growing, even less so than the *hemeris* (gall-oak), but the trunk is very thick, so that the whole appearance is stunted; for in growth this kind too is very leafy and not erect. The *aigilops* (Turkey oak) is the straightest growing and also the tallest and smoothest, and its wood, cut lengthways, is the strongest. It does not grow on tilled land, or very rarely.

[8.4] The ‘broad-leaved’ oak (scrub oak) comes second as to straightness of growth and length of timber to be got from it, but for use in building it is the worst next after the sea-bark oak, and it is even poor wood for burning and

making charcoal, as is also that of the sea-bark oak, and next after this kind it is the most worm-eaten. For the sea-bark oak has a thick trunk, but it is generally spongy and hollow when it is thick; wherefore it is useless for building. Moreover it rots very quickly, for the tree contains much moisture; and that is why it also becomes hollow; and some say that it is the only oak which has no heart. And some of the Aeolians say that these are the only oaks which are struck by lightning, although they are not lofty; nor do they use the wood for their sacrifices. Such then are the differences as to timber and general appearance.

[8.5] All the kinds produce galls, but only hemeris (gall-oak) produces one which is of use for tanning hides. That of aigilops (Turkey-oak) and that of the 'broad-leaved' oak (scrub oak) are in appearance like that of hemeris (gall-oak), but smoother and useless. This also produces the other gall, the black kind, with which they dye wool. The substance which some call tree-moss and which resembles rags is borne only by the aigilops (Turkey-oak); it is grey and rough and hangs down for a cubit's length, like a long shred of linen. This grows from the bark and not from the knob whence the acorn starts; nor does it grow from an eye, but from the side of the upper boughs. The sea-bark oak also produces this, but it is blackish and short.

[8.6] Thus the people of Mount Ida distinguish. But the people of Macedonia make four kinds, 'true-oak,' or the oak which bears the sweet acorns, 'broadleaved' oak (scrub oak), or that which bears the bitter ones, Valonia oak, or that which bears the round ones, and aspris (Turkey-oak); the lastnamed some say is altogether without fruit, some say it bears poor fruit, so that no animal eats it except the pig, and only he when he can get no others, and that after eating it the pig mostly gets an affection of the head. The wood is also wretched; when hewn with the axe it is altogether useless, for it breaks in pieces and falls asunder; if it is not hewn with the axe it is better, wherefore they so use it. It is even wretched for burning and for making charcoal; for the charcoal is entirely useless except to the smith, because it springs about and emits sparks. But for use in the smithy it is more serviceable than the other kinds, since, as it goes out when it ceases to be blown, little of it is consumed. The wood of the sea-bark oak is only useful for wheel-axles and the like purposes. Such are the varieties of the oak which men make out.

[9.1] The differences between other trees are fewer; for the most part men

distinguish them merely .according as they are ‘male’ or ‘female,’ as has been said, except in a few cases including the fir; for in this tree they distinguish the wild and the cultivated kinds, and make two wild kinds, calling one the ‘fir of Ida’ (Corsican pine) the other the ‘fir of the sea-shore’ (Aleppo pine); of these the former is straighter and taller and has thicker leaves, while in the latter the leaves are slenderer and weaker, and the bark is smoother and useful for tanning hides, which the other is not. Moreover the cone of the seaside kind is round and soon splits open, while that of the Idaean kind is longer and green and does not open so much, as being of wilder character. The timber of the seaside kind is stronger, — for one must note such differences also between trees of the same kind, since it is by their use that the different characters are recognised.

[9.2] The Idaean kind is, as we have said, of straighter- and stouter growth, and moreover the tree is altogether more full of pitch, and its pitch is blacker sweeter thinner and more fragrant when it is fresh; though, when it is boiled, it turns out inferior, because it contains so much watery matter. However it appears that the kinds which these people distinguish by special names are distinguished by others merely as ‘male’ and ‘female.’ The people of Macedonia say that there is also a kind of fir which bears no fruit whatever, in which the male’ (Aleppo pine) is shorter and has harder leaves, while the ‘female’ (Corsican pine) is taller and has glistening delicate leaves which are more pendent. Moreover the timber of the ‘male’ kind has much heart-wood, is tough, and warps in joinery work, while that of the ‘female’ is easy to work, does not warp, and is softer.

[9.3] This distinction between ‘male’ and ‘female’ may, according to the woodmen, be said to be common to all trees. Any wood of a ‘male’ tree, when one comes to cut it with the axe, gives shorter lengths, is more twisted, harder to work, and darker in colour; while the ‘female’ gives better lengths. For it is the ‘female’ fir which contains what is called the aigis; this is the heart of the tree; the reason being that it is less resinous, less soaked with pitch, smoother, and of straighter grain. This aigis is found in the larger trees, when, as they have fallen down, the white outside part has decayed; when this has been stripped off and the core left, it is cut out of this with the axe; and it is of a good colour with fine fibre. However the substance which the torch-cutters of Mount Ida call the ‘fig,’ which forms in the fir and is redder in colour than the

resin, is found more in the 'male' trees; it has an evil smell, not like the smell of resin, nor will it burn, but it leaps away from the fire.

[9.4] Such are the kinds of fir which they make out, the cultivated and the wild, the latter including the 'male' and the 'female' and also the kind which bears no fruit. However the Arcadians say that neither the sterile kind nor the cultivated is a fir, but a pine; for, they say, the trunk closely resembles the pine and has its slenderness, its stature, and the same kind of wood for purposes of joinery, the trunk of the fir being thicker smoother and taller; moreover that the fir has many leaves, which are glossy massed together and pendent, while in the pine and in the above-mentioned cone-bearing tree the leaves are few and drier and stiffer; though in both the leaves are hair-like. Also, they say, the pitch of this tree is more like that of the pine; for in the pine too it is scanty and bitter, as in this other cone-bearing tree, but in the fir it is fragrant and abundant. Now the pine is rare in Arcadia, but common in Elis. The Arcadians then dispute altogether the nomenclature.

[9.5] The pine appears to differ also from the fir in being glossier and having finer leaves, while it is smaller in stature and does not grow so straight; also in bearing a smaller cone, which is stiffer and has a more pitchy kernel, while its wood is whiter, more like that of the silver-fir, and wholly free from pitch. And there is another great difference between it and the fir; the fir, if it is burnt down to the roots, does not shoot up again, while the pine, according to some, will do so; for instance this happened in Lesbos, when the pine-forest of Pyrrha was burnt. The people of Ida say that the fir is liable to a kind of disease; — when not only the heart but the outer part of the trunk becomes glutted with pitch, the tree then is as it were choked. This happens of its own accord through the excessive luxuriance of the tree, as one may conjecture; for it all turns into pitch-glutted wood. This then is an affection peculiar to the fir.

[9.6] The silver-fir is either 'male' or 'female,' and has differences in its leaves; those of the 'male' are sharper more needle-like and more bent; wherefore the whole tree has a more compact appearance. There are also differences in the wood, that of the 'female' being whiter softer and easier to work, while the whole trunk is longer; that of the 'male' is less of a uniform colour thicker and harder, has more heart-wood, and is altogether inferior in appearance. In the cone of the 'male' are a few seeds at the apex, while that of

the 'female,' according to what the Macedonians said, contains none at all. The foliage is feathered and the height disproportionate so that the general appearance of the tree is dome-like, and closely resembles the Boeotian peasant's hat; and it is so dense that neither snow nor rain penetrates it. And in general the tree has a handsome appearance; for its growth is somewhat peculiar, as has been said, compared with the others, it being the only one which is regular, and in stature it is large, much taller than the fir.

[9.7] There is also not a little difference in the wood: that of the silver-fir is fibrous soft and light, that of the fir is resinous heavy and more fleshy. The fir has move knots, but the silver-fir harder ones; indeed they may be said to be harder than those of any tree, though the wood otherwise is softer. And in general the knots of silver-fir and fir are of the closest and most solid texture and almost transparent: in colour they are like resin-glutted wood, and quite different from the rest of the wood; and this is especially so — in the silver-fir. And just as the fir has its aegis, so the silver-fir has what is called its white 'centre,' which answers, as it were, to the aegis of the fir, except that it is white, while the other is bright-coloured because it is glutted with pitch. It becomes close white and good in trees which are of some age, but it is seldom found in good condition, while the ordinary form of it is abundant and is used to make painters' boards and ordinary writing tablets, superior ones being made of the better form.

[9.8] However the Arcadians call both substances aegis, alike that of the fir and the corresponding part of the silver-fir, and say that, though the silver-fir produces more, that of the fir is better; for that, though that of the silver-fir is abundant smooth and close, that of the fir, though scanty, is compacter, stronger and fairer in general. The Arcadians then appear to differ as to the names which they give. Such are the differences in the silver-fir as compared with the fir, and there is also that of having the amphaxis, which we mentioned before.

[10.1] The beech presents no differences, there being but one kind. It is a straight-growing smooth and unbranched tree, and in thickness and height is about equal to the silver-fir, which it also resembles in other respects; the wood is of a fair colour strong and of good grain, the bark smooth and thick, the leaf undivided, longer than a pear-leaf, spinous at the tip, the roots neither numerous nor running deep; the fruit is smooth like an acorn, enclosed in a

shell, which is however without prickles and smooth, not spinous,- like the chestnut, though in sweetness and flavour it resembles it. In mountain country it also grows white and has timber which is useful for many purposes, for making carts beds chairs and tables, and for shipbuilding; While the tree of the plains is black and useless for these purposes; but the fruit is much the same in both.

[10.2] The yew has also but one kind, is straightgrowing, grows readily, and is like the silver-fir, except that it is not so tall and is more branched. Its leaf is also like that of the silver-fir, but glossier and less stiff. As to the wood, in the Arcadian yew it is black or red, in that of Ida bright yellow and like prickly cedar; wherefore they say that dealers practise deceit, selling it for that wood: for that it is all heart, when the bark is stripped off; its bark also resembles that of prickly cedar in roughness and colour, its roots are few slender and shallow. The tree is rare about Ida, but common in Macedonia and Arcadia; it bears a round fruit a little larger than a bean, which is red in colour and soft; and they say that, if beasts of burden eat of the leaves they die, while ruminants take no hurt. Even men sometimes eat the fruit, which is sweet and harmless. The oslrys (hop-hornbeam), which some call oslrya, has also but one kind: it is like the beech in growth and bark; Its leaves are in shape like a pear's, except that they are much longer, come to a sharp point, are larger, and have many fibres, which branch out like ribs from a large straight one- in the middle, and are thick; also the leaves are wrinkled along the fibres and have a finely serrated edge; the wood is hard colourless and whitish; the fruit is small oblong and yellow like barley; it has shallow roots; it loves water and is found in ravines. It is said to be unlucky to bring it into the house, since, wherever it is, it is supposed to cause a painful death or painful labour in giving birth.

[10.3] The lime has both 'male' and 'female' forms, which differ in their general appearance, in that of the wood, and in being respectively fruit-bearing and sterile. The wood of the 'male' tree is hard yellow more branched closer, and also more fragrant; that of the 'female' is whiter. The bark of the 'male' is thicker, and, when stripped off, is unbending because of its hardness; that of the 'female' is thinner and flexible; men make their writingcases out of it. The 'male' has neither fruit nor flower, but the 'female' has both flower and fruit; the flower is cup-shaped, and appears alongside of the stalk of the leaf, or alongside of next year's winter-bud on a separate stalk; it is green,

when in the cup-like stage, but brownish as it opens; it appears at the same time as in the cultivated trees. The fruit is rounded oblong as large as a bean, resembling the fruit of the ivy; when mature, it has five angular projections, as it were, made by projecting fibres which meet in a point; the immature fruit is less articulated. When the mature fruit is pulled to pieces,- it shows some small fine seeds of the same size as those of orach. The leaf and the bark are well flavoured and sweet; the leaf is like that of the ivy in shape, except that it rounds more gradually, being most curved at the part next the stalk, but in the middle contracting to a sharper and longer apex, and its edge is somewhat puckered and jagged. The timber contains little core, which is not much softer than the other part; for the rest of the wood is also soft.

[11.1] Of the maple, as we have said, some make two kinds, some three; one they call by the general name 'maple,' another *zygia*, the third *klinotrokhos* ; this name, for instance, is used by the people of Stagira. The difference between *zygia* and maple proper is that the latter has white wood of finer fibre, while that of *zygia* is yellow and of compact texture. The leaf in both trees is large, resembling that of the plane in the way in which it is divided; it is smooth/ but more delicate, less fleshy, softer, longer in proportion to its breadth, and the divisions — all tend to meet in a point, while they do not occur so much in the middle of the leaf, but rather at the tip; and for their size the leaves have not many fibres. The bark too is somewhat rougher than that of the lime, of blackish colour thick closer than that of the Aleppo pine and stiff; the roots are few shallow and compact for the most part, both those of the yellow and those of the whitewooded tree. This tree occurs chiefly in wet ground, as the people of Mount Ida say, and is rare. About its flower they did not know, but the fruit, they said, is not very oblong, but like that of Christ's thorn,- except that it is more oblong than that. But the people of Mount Olympus say that, while *zygia* is rather a mountain tree, the maple proper grows also in the plains; and that the form which grows in the mountains has yellow wood of a bright colour, which is of compact texture and hard, and is used even for expensive work, while that of the plains has white wood of looser make and less compact texture. And some call it *gleinos* instead of maple. The wood of the 'male' tree is of compacter texture and twisted; this tree, it is said, grows rather in the plain and puts forth its leaves earlier.

[11.2] There are also two kinds of ash. Of these one is lofty and of strong

growth with white wood of good fibre, softer, with less knots, and of more compact texture; the other is shorter, less vigorous in growth, rougher harder and yellower. The leaves in shape are like those of the bay, that is, the broad-leaved bay, but they contract to a sharper point, and they have a sort of jagged outline with sharp points. The whole leaf (if one may consider this as a 'leaf' because it is all shed at once) grows on a single stalk; on either side of a single fibre, as it were, the leaflets grow at a joint in pairs, which are numerous and distinct, just as in the sorb. In some leaves the joints are short and the pairs fewer in number, but in those of the white kind the joint is long and the pairs more numerous, while the leaflets are longer narrower and leek-green in colour. Also this tree has a smooth bark, which is dry thin and red in colour. The roots are matted stout and shallow. As to the fruit, the people of Ida supposed it to have none, and no flower either; however it has a nut-like fruit in a thin pod, like the fruit of the almond, and it is somewhat bitter in taste. And it also bears certain other things like winter-buds, as does the bay, but they are more solid,' and each separate one is globular, like those of the plane; some of these occur around the fruit, some, in fact the greater number, are at a distance from it. The smooth kind grows mostly in deep ravines and damp places, the rough kind occurs also in dry- and rocky parts. Some, for instance the Macedonians, call the one 'ash' (manna-ash), the other 'horse-ash' (ash). The 'horse-ash' is a larger and more spreading tree, wherefore it is of less compact appearance. It is naturally a tree of the plains and rough, while the other belongs to the mountains and is smooth; the one which grows on the mountains is fair-coloured smooth hard and stunted, while that of the plains is colourless spreading and rough. (In general one may say of trees that grow in the plain and on the mountain respectively, that the latter are of fair colour hard and smooth, as beech elm and the rest; while those of the plain are more spreading, of less good colour and inferior, except the pear apple and wild pear, according to the people of Mount Olympus. These when they grow in the plain are better both in fruit and in wood; for on the mountain they are rough spinous and much branched, in the plain smoother larger and with sweeter and fleshier fruit. However the trees of the plain are always of larger size.)

[12.1] Of the cornelian cherry there is a 'male' and a 'female' kind (cornel), and the latter bears a corresponding name. Both have a leaf like that of the

almond, but oilier and thicker; the bark is fibrous and thin, the stem is not very thick, but it puts out sidebranches like the chaste-tree, those of the 'female' tree, which is more shrubby, being fewer. Both kinds have branches like those of the chaste-tree, arranged in pairs opposite one another. The wood of the 'male' tree has no heart, but is hard throughout, like horn in closeness and strength; whereas that of the 'female' tree has heart-wood and is softer and goes into holes; wherefore it is useless for javelins. The height of the male tree is at most twelve cubits, the length of the longest Macedonian spear, the stem up to the point where it divides not being very tall. The people of Mount Ida in the Troad say that the 'male' tree is barren, but that the 'female' bears fruit. The fruit has a stone like an olive and is sweet to the taste and fragrant; the flower is like that of the olive, and the tree produces its flowers and fruit in the same manner, inasmuch as it has several growing from one stalk, and they are produced at almost the same time in both forms. However the people of Macedonia say that both trees bear fruit, though that of the 'female' is uneatable, and the roots are like those of the chaste-tree, strong and indestructible. This tree grows in wet ground and not only in dry places; and it comes from seed, and also can be propagated from a piece torn off.

[12.2] The 'cedar,' some say, has two forms, the Lycian and the Phoenician; but some, as the people of Mount Ida, say that there is only one form. It resembles the arkeuthos (Phoenician cedar), differing chiefly in the leaf, that of 'cedar' being hard, sharp and spinous, while that of arkeuthos is softer: the latter tree also seems to be of taller growth. However some do not give them distinct names, but call them both 'cedar' distinguishing them however as 'the cedar' and 'prickly cedar.' Both are branching trees with many joints and twisted wood. On the other hand arkeuthos has only a small amount of close core, which, when the tree is cut, soon rots, while the trunk of 'cedar' consists mainly of heart and does not rot. The colour of the heart in each case is red: that of the 'cedar' is fragrant, but not that of the other. The fruit of 'cedar' is yellow, as large as the myrtle-berry, fragrant, and sweet to the taste. That of arkeuthos is like it in other respects, but black, of astringent taste and practically uneatable; it remains on the tree for a year, and then, when another grows, last year's fruit falls off. According to the Arcadians it has three fruits on the tree at once, last year's, which is not yet ripe, that of the year before last which is now ripe and eatable, and it also shews the new fruit. Satyrus

said that the wood-cutters gathered him specimens of both kinds which were flowerless. The bark is like that of the cypress but rougher. Both kinds have spreading shallow roots. These trees grow in rocky cold parts and seek out such districts. There are three kinds of mespile, anthedon ‘oriental thorn’), sataneios (medlar) and anthedonoeides (hawthorn), as the people of mount Ida distinguish them. The fruit of the medlar is larger paler more spongy and contains softer stones; in the other kinds it is somewhat smaller, more fragrant and of more astringent taste, so that it can be stored for a longer time. The wood also of these kinds is closer and yellower, though in other respects it does not differ. The flower in all the kinds is like the almond flower, except that it is not pink, as that is, but greenish — In stature the tree is large and it has thick foliage. The leaf in the young tree is round but much divided and like celery at the tip; but the leaf of older trees is very much divided and forms angles with larger divisions; it is smooth fibrous thinner and more oblong than the celery leaf, both as a whole and in its divisions, and it has a jagged edge all round. It has a long thin stalk, and the leaves turn bright red before they are shed. The tree has many roots, which run deep; wherefore it lives a long time and is hard to kill. The wood is close and hard and does not rot. The tree grows from seed and also from a piece torn off. It is subject to a disease which causes it to become wormeaten in its old age, and the worms are large and different to those engendered by other trees.

[12.3] Of the sorb they make two kinds, the ‘female’ which bears fruit and the ‘male’ which is barren. There are moreover differences in the fruit of the ‘female’ kind; in some forms it is round, in others oblong and egg-shaped. There are also differences in taste; the round fruits are generally more fragrant and sweeter, the oval ones are often sour and less fragrant. The leaves in both grow attached to a long fibrous stalk, and project on each side in a row like the feathers of a bird’s wing, the whole forming a single leaf but being divided into lobes with divisions which extend to the rib; but each pair are some distance apart,- and, when the leaves fall, these divisions do not drop separately, but the whole wing-like structure drops at once. When the leaves are older and longer, the pairs are more numerous; in the younger and shorter leaves they are fewer; but in all at the end of the leaf-stalk there is an extra leaflet, so that the total number of leaflets is an odd number. In form the leaflets resemble the leaves of the ‘fine-leaved’ bay, except that they are

jagged and shorter and do not narrow to a sharp point but to a more rounded end. The flower is clustering and made up of a number of small white blossoms from a single knob. The fruit too is clustering, when the tree fruits well; for a number of fruits are formed from the same knob, giving an appearance like a honeycomb. The fruit gets eaten by worms on the tree before it is ripe to a greater extent than that of medlar pear or wild pear, and yet it is much more astringent than any of these. The tree itself also gets worm-eaten, and so withers away as it ages; and the worm which infests it is a peculiar one, red and hairy. This tree bears fruit when it is quite young, that is as soon as it is three years old. In autumn, when it has shed its leaves, it immediately produces its winter-bud-like knob, which is glistening and swollen as though the tree were just about to burst into leaf, and this persists through the winter. The sorb, like the medlar, is thornless; it has smooth rather shiny bark, (except when the tree is old), which in colour is a whitish yellow; but in old trees it is rough and black. The tree is of a good size, of erect growth and with well balanced foliage; for in general it assumes a conelike shape as to its foliage, unless something interferes. The wood is hard close strong and of a good colour; the roots are not numerous and do not run deep, but they are strong and thick and indestructible. The tree grows from a root, from a piece torn off, or from seed, and seeks a cold moist position; in such a position it is tenacious of life and hard to kill: however it also grows on mountains.

[13.1] The kerasos (bird-cherry) is peculiar in character; it is of great stature, growing as much as twenty-four cubits high; and it is of very erect growth; as to thickness, it is as much as two cubits in circumference at the base. The leaves are like those of the medlar, but very tough and thicker, so that the tree is conspicuous by its colour from a distance. The bark in smoothness colour and thickness is like that of the lime; wherefore men make their writing-cases from it, as from the bark of that tree. This bark does not grow straight nor evenly all round the tree, but runs round it in a spiral (which becomes closer as it gets higher up the tree) like the outline of the leaves. And this part of it can be stripped off by peeling, whereas with the other part — this is not possible and it has to be cut in short lengths.

[13.2] In the same manner part is removed by being split off in flakes as thin as a leaf, while the rest can be left and protects the tree, growing about it as

described. If the bark is stripped off when the tree is peeling, there is also at the time a discharge of the sap; further, when only the outside coat is stripped off, what remains turns black with a kind of mucus-like moisture; and in the second year another coat grows to replace what is lost, but this is thinner. The wood in its fibres is like the bark, twisting spirally,- and the branches grow in the same manner from the first; and, as the tree grows, it comes to pass that the lower branches keep on perishing, while the upper ones increase.

[13.3] However the whole tree is not much branched, but has far fewer branches than the black poplar. Its roots are numerous and shallow and not very thick; and there is a similar twisting of the root and of the bark which surrounds it. The flower is white, like that of the pear and medlar, composed of a number of small blossoms arranged like a honeycomb. The fruit is red, like that of diospyros in shape, and in size it is as large as a bean. However the stone of the diospyros fruit is hard, while that of the bird-cherry is soft. The tree grows where the lime grows, and in general where there are rivers and damp places.

[13.4] The elder also grows chiefly by water and in shady places, but likewise in places which are not of this character. It is shrubby, with annual branches which go on growing in length till the fall of the leaf, after which they increase in thickness. The branches do not grow to a very great height, about six cubits at most. The thickness of the stem of old trees is about that of the 'helmet' of a ship; the bark is smooth thin and brittle; the wood is porous and light when dried, and has a soft heart-wood, so that the boughs are hollow right through, and men make of them their light walking-sticks. When dried it is strong and durable if it is soaked, even if it is stripped of the bark; and it strips itself of its own accord as it dries. The roots are shallow and neither numerous nor large.

[13.6] The single leaflet is soft and oblong, like the leaf of the 'broad-leaved' bay, but larger broader and rounder at the middle and base, though the tip narrows more to a point and is jagged all round. The whole leaf is composed of leaflets growing about a single thick fibrous stalk, as it were, to which they are attached at either side in pairs at each joint; and they are separate from one another, while one is attached to the tip of the stalk. The leaves are somewhat reddish porous and fleshy: the whole is shed in one piece; wherefore one may consider the whole structure as a 'leaf.' The young twigs too have certain

crooks in them. The flower is white, made, up of a number of small white blossoms attached to the point where the stalk divides, in form like a honeycomb, and it has the heavy fragrance of lilies. The fruit is in like manner attached to a single thick stalk, but in a cluster: as it becomes quite ripe, it turns black, but when unripe it is like unripe grapes; in size the berry is a little larger than the seed of a vetch; the juice is like wine in appearance, and in it men bathe — their hands and heads when they are being initiated into the mysteries. The seeds inside the berry are like sesame.

[13.7] The willow also grows by the water, and there are many kinds. There is that which is called the black willow because its bark is black and red, and that which is called the white from the colour of its bark. The black kind has boughs which are fairer and more serviceable for basketwork, while those of the white are more brittle. There is a form both of the black and of the white which is small and does not grow to a height, — just as there are dwarf forms of other trees, such as prickly cedar and palm. The people of Arcadia call the tree not ‘willow’ but helike: they believe, as was said, that it bears fruitful seed.

[14.1] Of the elm there are two kinds, of which one is called the ‘mountain elm,’ the other simply the ‘elm’: the difference is that the latter is shrubbier, while the mountain elm grows more vigorously. The leaf is undivided and slightly jagged, longer than that of the pear, but rough rather than smooth. The tree is large, being both tall and wide-spreading. It is not common about Ida, but rare, and likes wet ground. The wood is yellow strong fibrous and tough; for it is all heart. Men use it for expensive doors: it is easy to cut when it is green, but difficult when it is dry. The tree is thought to bear no fruit, but in the ‘wallets’ it produces its gum and certain creatures like gnats; and it has in autumn its peculiar ‘winter-buds’ which are numerous small and black, but these have not been observed at other seasons.

[14.2] The abele and the black poplar have each but a single kind: both are of erect growth, but the black poplar is much taller and of more open growth, and is smoother, while the shape of its leaves is similar to those of the other. The wood also of both, when cut, is much the same in whiteness. Neither of these trees appears to have fruit or flower. The aspen is a tree resembling the abele both in size and in having whitish branches, but the leaf is ivy-like: while however it is otherwise without angles, its one angular projection is

long and narrows to a sharp point: in colour the upper and under sides are much alike. The leaf is attached to a long thin stalk: wherefore the leaf is not set straight, but has a droop. The bark of the abele is rougher and more scaly, like that of the wild pear, and it bears no fruit.

[14.3] The alder also has but one form: in growth it is also erect, and it has soft wood and a soft heart-wood, so that the slender boughs are hollow throughout. The leaf is like that of the pear, but larger and more fibrous. It has rough bark, which on the inner side is red: wherefore it is used for dyeing hides. It has shallow roots . . . the flower is as large as that of the bay. It grows in wet places' - and nowhere else.

[14.4] The semyda has a leaf like that of the tree called the 'Persian nut' (walnut), but it is rather narrower: the bark is variegated and the wood light: it is only of use for making walking-sticks and for no other purpose. The bladder-senna has a leaf near that of the willow, but is many-branched and has much foliage; and the tree altogether is a large one. The fruit is in a pod, as in leguminous plants: the pods in fact are broad rather than narrow, and the seed in them is comparatively small, and is moderately hard, but not so very hard. For its size the tree does not bear much fruit. It is uncommon to have the fruit in a pod; in fact there are few such trees.

[15.1] The filbert is also naturally a wild tree, in that its fruit is little, if at all, inferior to that of the tree in cultivation, that it can stand winter, that it grows commonly on the mountains, and that it bears abundance of fruit in mountain regions; also because it does not make a trunk, but is shrubby with unbranched stems without knots; though some of these are long and stout. Nevertheless it also submits to cultivation. The cultivated form differs in producing better fruit and larger leaves; in both forms the leaf has a jagged edge: the leaf of the alder most closely resembles it, but is broader, and the tree itself is bigger. The filbert is always more fruitful if it has its slender boughs cut off. — There are two kinds of each sort; some have a round, others an oblong nut; that of the cultivated tree is paler, and it fruits best in damp places. The wild tree becomes cultivated by being transplanted. Its bark is smooth,' consisting of one layer, thin glossy and with peculiar white blotches on it. The wood is extremely tough, so that men make baskets even of the quite thin twigs, having stripped them of their bark, and of the stout ones when they have whittled them. Also it has a small amount of yellow heart-

wood, which makes the branches hollow. Peculiar to these trees is the matter of the catkin, as we mentioned.

[15.2] The terebinth has a 'male' and a 'female' form. The 'male' is barren, which is why it is called male'; the fruit of one of the 'female' forms is red from the first and as large as an unripe lentil; the other produces a green fruit which subsequently turns red, and, ripening at the same time as the grapes, becomes eventually black and is as large as a bean, but resinous and somewhat aromatic. About Ida and in Macedonia the tree is low shrubby and twisted, but in the Syrian Damascus, where it abounds, it is tall and handsome; indeed they say that there is a certain hill which is covered with terebinths, though nothing else grows on it. It has tough wood and strong roots which run deep, and the tree as a whole is impossible to destroy. The flower is like that of the olive, but red in colour. The leaf is made up of a number of leaflets, like bay leaves, attached in pairs to a single leaf-stalk. So far it resembles the leaf of the sorb; there is also the extra leaflet at the tip: but the leaf is more angular than that of the sorb, and the edge resembles more the leaf of the bay; the leaf is glossy all over,- as is the fruit. It bears also some hollow bag-like growths, like the elm, in which are found little creatures like gnats; and resinous sticky matter is found also in these bags; but the resin is gathered from the wood and not from these. The fruit does not discharge much resin, but it clings to the hands, and, if it is not washed after gathering, it all sticks together; if it is washed, the part which is white and unripe floats, but the black part sinks.

[15.3] The box is not a large tree, and it has a leaf like that of the myrtle. It grows in cold rough places; for of this character is Cytora, where it is most abundant. The Macedonian Olympus is also a cold region; for there too it grows, though not to a great size. It is largest and fairest in Corsica, where the tree grows taller and stouter than anywhere else; wherefore the honey there is not sweet, as it smells of the box.

[15.4] The krataigos is a very common tree; some call it krataigon. It has a smooth leaf like that of the medlar, but longer, and its breadth is greater than its length, while the edge is not jagged like that of the medlar. The tree does not grow very tall or thick; its wood is mottled strong and brown; it has a smooth bark like that of the medlar; it has generally a single root, which runs deep. The fruit is round and as large as that of the wild olive; as it ripens it

turns brown and black; in taste and flavour it is like that of the medlar; wherefore this might seem to be a sort of wild form of that tree. There is only one form of it and it shews no variation.

[16.1] The kermes-oak has a leaf like that of the oak, but smaller and spinous, while its bark is smoother than that of the oak. The tree itself is large, like the oak, if it has space and root-room; the wood is close and strong; it roots fairly deep and it has many roots. The fruit is like an acorn, but the kermes oak's acorn is small; the new one overtakes that of last year, for it ripens late. Wherefore some say that it bears twice. Besides the acorn it bears a kind of scarlet berry; it also has oak-mistletoe and mistletoe; so that sometimes it happens that it has four fruits on it at once, two which are its own and two others, namely those of the oak-mistletoe and of the mistletoe. It produces the oak-mistletoe on the north side and the mistletoe on the south.

[16.2] The Arcadians have a tree which they call smilax (holm-oak), which resembles the kermes-oak, but has not spinous leaves, its leaves being softer and longer — and differing in several other ways. Nor is the wood hard and close like that of the kermes oak, but quite soft to work.

[16.3] The tree which the Arcadians call 'cork-oak' (holm-oak) has this character: — to put it generally, it is between the kermes-oak and the oak; and some suppose it to be the 'female' kermes-oak; wherefore, where the kermes-oak does not grow, they use this tree for their carts and such-like purposes; for instance it is so used by the peoples of Lacedaemon and Elis. The Dorians also call the tree aria. Its wood is softer and less compact than that of the kermes-oak, but harder and closer than that of the oak. When it is barked, the colour of the wood is paler than that of the kermes-oak, but redder than that of the oak. The leaves resemble those of both trees, but they are somewhat large, if we consider the tree as a kermes-oak, and somewhat small if we regard it as an oak. The fruit is smaller in size than that of the kermes-oak, and equal to the smallest acorns; it is sweeter than that of the kermes-oak, bitterer than that of the oak. Some call the fruit of the kermes oak and of the aria 'mast,' keeping the name 'acorn' for the fruit of the oak. It has a core which is more obvious than in kermes-oak. Such is the character of the 'cork-oak,'

[16.4] The arbutus, which produces the edible fruit called memaikylon, is not a very large tree; its bark is thin and like that of the tamarisk, the leaf is between that of the kermes-oak and that of the bay. It blooms in the month

Pyanepsion; the flowers grow in clusters at the end of the boughs from a single attachment; in shape each of them is like an oblong myrtle flower and it is of about the same size; it has no petals, but forms a cup like an empty eggshell, and the mouth is open: when the flower drops off, there is a hole also through the part by which it is attached, and the fallen flower is delicate and like a whorl on a spindle or a Doric karneios. The fruit takes a year to ripen, so that it comes to pass that this and the new flower are on the tree together.

[16.5] The andrachne has a leaf like that of the arbutus and is not a very large tree; the bark is smooth and cracked,' the fruit is like that of the arbutus.

[16.6] The leaf of the wig-tree is also like that of the last named tree, but it is a small tree. Peculiar to it is the fact that the fruit passes into down; we have not heard of such a thing in any other tree. These trees are found in a good many positions and regions.

[17.1] Some however are more local, such as the cork-oak: this occurs in Tyrrhenia; it is a tree with a distinct trunk and few branches, and is fairly tall and of vigorous growth. The wood is strong, the bark very thick and cracked, like that of the Aleppo pine, save that the cracks are larger. The leaf is like that of the manna-ash, thick and somewhat oblong. The tree is not evergreen but deciduous. It has always an acorn-like fruit like that of the aria (holm-oak). They strip off the bark, and they say that it should all be removed, otherwise the tree deteriorates: it is renewed again in about three years.

[17.2] The kolutea too is a local tree, occurring in the Lipari islands. It is a tree of good size, and bears its fruit, which is as large as a lentil, in pods; this fattens sheep wonderfully. It grows from seed, and also grows very well from sheep-droppings. The time for sowing it is the setting of Arcturus; and one should first soak the seed and sow it when it is already sprouting in the water. It has a leaf like telis (fenugreek). At first it grows for about three years with a single stem, and in this period men cut their walking-sticks from it; for it seems that it makes excellent ones. And, if the top is cut off during this period, it dies, for it makes no sideshoots. After this period it divides, and in the fourth year develops into a tree.

[17.3] The tree found about Mount Ida, called koloitia, is a distinct kind and is shrubby and branching with many boughs; but it is rather rare. It has a leaf like that of the 'broad-leaved' bay, but rounder and larger, so that it looks like

that of the elm but it is more oblong: the colour on both sides is green, but the base is whitish; in this part it is very fibrous, because of its fine fibres which spring partly from the midrib, partly between the ribs (so to call them) which run out from the midrib. The bark is not smooth but like that of the vine; the wood is hard and close, the roots are shallow slender and spreading, (though sometimes they are compact), and they are very yellow. They say that this shrub has no fruit nor flower, but has its knobby winter-bud and its 'eyes'; these grow alongside of the leaves, and are very smooth glossy and white, and in shape are like a winter-bud. When the tree is cut or burnt down, it grows from the side and springs up again.

[17.4] There are also three trees peculiar to Mount Ida, the tree called Alexandrian laurel, a sort of fig, and a vine (currant grape). The peculiarity of the laurel is that it bears fruit on its leaves, like the 'prickly myrtle' (butcher's broom): both have their fruit on the midrib of the leaf.

[17.5] The 'fig' is shrubby and not tall, but so thick that the stem is a cubit in circumference. The wood is twisted and tough; below it is smooth and unbranched, above it has thick foliage: the colour both of leaf and bark is a dull green, the shape of the leaf is like that of the lime; it is soft and broad, and in size it also corresponds; the flower is like that of the medlar, and the tree blooms at the same time as that tree. The fruit, which they call a 'fig' is red, and as large as an olive, but it is rounder and is like the medlar in taste; the roots are thick like those of the cultivated fig, and tough. The tree does not rot, and it has a solid heart, instead of ordinary heart-wood.

[17.6] The 'vine' (currant grape) grows about the place called Phalakrai in the district of Ida; it is shrubby with small twigs; the branches are about a cubit long, and attached to them at the side are black berries, which are the size of a bean and sweet; inside they have a sort of soft stone; the leaf is round undivided and small.

[18.1] Most other mountains too have certain peculiar products, whether trees shrubs or other woody plants. However we have several times remarked as to such peculiarities that they occur in all regions. Moreover the variation-between things of the same kind which we find in trees obtains also among shrubs and most other things, as has been Siiid: for instance, we find it in buckthorn, Christ's thorn, withy, sumach, ivy, bramble, and many others.

[18.2] Thus of buckthorn there is the black and the white form, and there is

difference in the fruit, though both bear thorns. Of the withy there is a black and a white form; the flower and fruit of each respectively correspond in colour to the name; but some specimens are, as it were, intermediate, the flower being purplish, and neither wine-coloured nor whitish as in the others. The leaves in the white kind are also slenderer and smoother, as also are the branches.

[18.3] There is variation also in the Christ's thorn . . . all these forms are fruit-bearing. Christ's thorn has its fruit in a sort of pod, resembling a leaf, which contains three or four seeds. Doctors bruise them and use them against coughs; for they have a certain viscous and oily character, like linseed. The shrub grows in wet and dry places alike, like the bramble. But it is deciduous, and not evergreen like buckthorn.

[18.4] Of the bramble again there are several kinds, shewing very great variation; one is erect and tall, another runs along the ground and from the first bends downwards, and, when it touches the earth, it roots again; this some call the 'ground bramble.' The 'dog's bramble' (wild rose) has a reddish fruit, like that of the pomegranate; and, like the pomegranate, it is intermediate between a shrub and a tree; but the leaf is spinous.

[18.5] Of the sumach they recognise a 'male' and a 'female' form, the former being barren, the latter fruit-bearing. The branches are not lofty nor stout, the leaf is like that of the elm, but small more oblong and hairy. On the young shoots the leaves grow in pairs at equal distances apart, corresponding to each other on the two sides, so that they are in regular rows. Tanners use this tree for dyeing white leather. The flower is white and grows in clusters; the general form of it, with branchlets, is like that of the grape-bunch; when the flowering is over, the fruit reddens like the grape, and the appearance of it is like small lentils set close together; the form of these too is clustering. The fruit contains the drug called by the same name, which is a bony substance; it is often still found even when the fruit has been put through a sieve. The root is shallow and single, so that these trees are easily bent right over, root and all. The wood has heart-wood, and it readily perishes and gets worm-eaten. The tree occurs in all regions, but flourishes most in clayey soils.

[18.6] The ivy also has many forms; one kind grows on the ground, another grows tall, and of the tall-growing ivies there are several kinds. However the three most important seem to be the white, the black and the helix. And of

each of these there are several forms. Of the 'white' one is white only in its fruit, another in its leaves also. Again to take only white-fruited sorts, one of these has its fruit well formed close and compact like a ball; and this kind some call korymbias, but the Athenians call it the 'Acharnian' ivy. Another kind is smaller and loose in growth like the black ivy. There are also variations in the black kind, but they are not so well marked.

[18.7] The helix presents the greatest differences; the principal difference is in the leaves, which are small angular and of more graceful proportions, while those of the ivy proper are rounder and simple; there is also difference in the length of the twigs, and further in the fact that this tree is barren. For, as to the view that the helix by natural development turns into the ivy, some insist that this is not so, the only true ivy according to these being that which was ivy from the first; (whereas if, as some say, the helix invariably turns into ivy, the difference would be merely one of age and condition, and not of kind, like the difference between the cultivated and the wild pear). However the leaf even of the fullgrown helix is very different from that of the ivy, and it happens but rarely and in a few specimens that in this plant a change in the leaf occurs as it grows older, as it does in the abele and the castor-oil plant. There are several forms of the helix, of which the three most conspicuous and important are the green 'herbaceous' kind (which is the commonest), the white, and the variegated, which some call the 'Thracian' helix. Each of these appears to present variations; of the green one form is slenderer and has more regular and also closer leaves, the other has all these characteristics in a less degree. Of the variegated kind again one sort has a larger, one a smaller leaf, and the variegation is variable. In like manner the various forms of the white helix differ in size and colour. The 'herbaceous' kind is the most vigorous and covers most space. They say that the form which is supposed to turn into ivy is clearly marked not only by its leaves, because they are larger and broader, but also by its shoots; for these are straight from the first, and this form does not bend over like the other; also because the shoots are slenderer and larger, while those of the ivy-like form are shorter and stouter. The ivy too, when it begins to seed, has its shoots upwardgrowing and erect.

[18.8] All ivies have numerous close roots, which are tangled together woody and stout, and do not run very deep; but this is specially true of the black kind and of the roughest and wildest forms of the white. Wherefore it is

mischievous to plant this against any tree; for it destroys and stanes any tree by withdrawing the moisture. This form also more than the others grows stout and becomes treelike, and in fact becomes itself an independent ivy tree, though in general it likes and seeks to be against another tree, and is, as it were, parasitic. Moreover from the first it has also this natural characteristic, that it regularly puts forth roots from the shoots between the leaves, by means of which it gets a hold of trees and walls, as if these roots were made by nature on purpose. Wherefore also by withdrawing and drinking up the moisture it starves its host, while, if it is cut off below, it is able to survive and live. There are also other not inconsiderable differences in the fruit; both in the white and in the black kind it is in some cases rather sweet, in others extremely bitter; in proof whereof birds eat one but not the other. Such are the facts about ivy.

[18.9] The smilax is parasitic, but its stem is thorny and has, as it were, straight thorns; the leaf is ivylike small and without angles, and makes a callus at the junction with the stalk. A peculiarity of it is its conspicuous slender midrib, so to call it, which divides it in two; also the fact that the thread-like branchings do not start from this, as in other leaves, but are carried in circles round it, starting from the junction of the leaflet with the leaf. And at the joints of the stem and the spaces between the leaves there grows from the same stalk as the leaves a fine spiral tendril. The flower is white and fragrant like a lily. The fruit is like the strykhnos and the meloihron (bryony), and most of all like the berry which is called the 'wild grape' (bryony). The clusters hang down as in the ivy, but the regular setting — of the berries resembles the grape-cluster more closely; for the stalks which bear the berries start from a single point. The fruit is red, having generally two stones, the larger ones three and the smaller one; the stone is very hard and in colour black outside. A peculiarity of the clusters is that they make a row along the sides of the stalk, and the longest cluster is at the end of the stalk, as in the buckthorn and the bramble. It is clear that the fruit is produced both at the end and at the sides.

[18.10] The tree called the spindle-tree grows, among other places, in Lesbos, on the mountain called Ordynnos. It is as large as the pomegranate and has a leaf like that of that tree, but larger than that of the periwinkle, and soft, like the pomegranate leaf. It begins to shoot about the month Poseideon, and flowers in the spring; the flower in colour is like the gilliflower, but it has a

horrible smell, like shed blood. The fruit, with its case, is like the pod of sesame; inside it is hard, but it splits easily according to its four divisions. This tree, if eaten by sheep, is fatal to them, both the leaf and the fruit, and it is especially fatal to goats unless they are purged by it; and the purging is effected by diarrhoea. So we have spoken of trees and shrubs; in what follows we must speak of the plants which remain.

BOOK IV. OF THE TREES AND PLANTS SPECIAL TO PARTICULAR DISTRICTS AND POSITIONS.

[1.1] The differences between trees of the same kind have already been considered. Now all grow fairer and are more vigorous in their proper positions; for wild, no less than cultivated trees, have each their own positions: some love wet and marshy ground, as black poplar and willow, and in general those that grow by rivers; some love exposed and sunny positions; some prefer a shady place. The fir is fairest and tallest in a sunny position, and does not grow at all in a shady one; the silver-fir on the contrary is fairest in a shady place, and not so vigorous in a sunny one.

[1.2] Thus there is in Arcadia near the place called Krane a low-lying district sheltered from wind, into which they say that the sun never strikes; and in this district the silver-firs excel greatly in height and stoutness, though they have not such close grain nor such comely wood, but quite the reverse, — like the fir when it grows in a shady place. Wherefore men do not use these for expensive work, such as doors or other choice articles, but rather for ship-building and house-building. For excellent rafters beams and yard-arms are made from these, and also masts of great length which are not however equally strong; while masts made of trees grown in a sunny place are necessarily short but of closer grain and stronger than the others.

[1.3] Yew, pados and joint-fir rejoice exceedingly in shade. On mountain tops and in cold positions odorous cedar grows even to a height, while silver-fir and Phoenician cedar grow, but not to a height, — for instance on the top of Mount Cyllene; and holly also grows in high and very wintry positions. These trees then we may reckon as cold-loving; all others, one may say in general, prefer a sunny position. However this too depends partly on the soil appropriate to each tree; thus they say that in Crete on the mountains of Ida and on those called the White Mountains the cypress is found on the peaks whence the snow never disappears; for this is the principal tree both in the island generally and in the mountains.

[1.4] Again, as has been said already, both of wild and of cultivated trees some belong more to the mountains, some to the plains. And on the mountains themselves in proportion to the height some grow fairer and more vigorous in the lower regions, some about the peaks. However it is true of all trees

anywhere that with a north aspect the wood is closer and more compact and better generally; and, generally speaking, more trees grow in positions facing the north. Again trees which are close together grow and increase more in height, and so become unbranched straight and erect, and the best oar-spars are made from these, while those that grow far apart are of greater bulk and denser habit; wherefore they grow less straight and with more branches, and in general have harder wood and a closer grain.

[1.5] Such trees exhibit nearly the same differences, whether the position be shady or sunny, windless or windy; for trees growing in a sunny or windy position are more branched shorter and less straight. Further that each tree seeks an appropriate position and climate is plain from the fact that some districts bear some trees but not others; (the latter do not grow there of their own accord, nor can they easily be made to grow), and that, even if they obtain a hold, they do not bear fruit — as was said of the date-palm the sycamore and others; for there are many trees which in many places either do not grow at all, or, if they do, do not thrive nor bear fruit, but are in general of inferior quality. And perhaps we should discuss this matter, so far as our enquiries go.

[2.1] Thus in Egypt there are a number of trees which are peculiar to that country, the sycamore the tree called persea, the balanos, the acacia and some others.

[2.2] Now the sycamore to a certain extent resembles the tree which bears that name in our country; its leaf is similar, its size, and its general appearance; but it bears its fruit in a quite peculiar manner, as was said at the very outset; it is borne not on the shoots or branches, but on the stem; in size it is as large as a fig, which it resembles also in appearance, but in flavour and sweetness it is like the 'immature figs,' except that it is much sweeter and contains absolutely no seeds, and it is produced in large numbers. It cannot ripen unless it is scraped; but they scrape it with iron 'claws'; the fruits thus scraped ripen in four days. If these are removed, others and others again grow from exactly the same point, and this some say occurs three times over, others say it can happen more times than that. Again the tree is very full of sap, and its wood is useful for many purposes. There is another peculiar property which it appears to possess; when it is cut, it is at first green, but it dries in deep water; they put it at once in a hole or in pools and so season it; and it

becomes dry by being soaked in the deep water, and when it is completely dry, it is fetched up and floats and is then thought to be duly seasoned; for it is now light and porous. Such are the peculiarities of the sycamore.

[2.3] Somewhat similar appears to be the character of the tree which in Crete is called the 'Cyprian fig' (sycamore). For this also bears its fruit on the stem and on the thickest branches; but in this case there is a small leafless shoot, like a root, to which the fruit is attached. The stem is large and like the abele, but the leaf is like that of the elm. It ripens its fruit four times a year, having also four periods of growth; but it ripens no fruit unless the 'fig' is split and the juice let out. The sweet taste resembles that of the fig, and the inside of the fruit is like that of wild figs: it is as large as a plum.

[2.4] (Like this too is the tree which the Ionians call carob; for this too bears most of its fruit on the stem, though it bears a little also on the branches, as we said. The fruit is in a pod; some call it the 'Egyptian fig' — erroneously; for it does not occur at all in Egypt, but in Syria and Ionia and also in Cnidos and Rhodes. It is evergreen and has a whitish flower and is somewhat acrid; it does not attain to a great height, and it sends out side-shoots entirely from its lower parts, while it withers above. It has on it at the same time both last year's fruit and the new fruit; for if the one is removed after the rising of the dog-star, immediately the other is seen swelling up; for there swells up as it were another similar cluster. This then increases and flowers about the rising of Arcturus and the equinox; and thenceforward it persists through the winter to the rising of the dog-star. The likeness then consists in the fact that these trees too bear fruit on their stems, and the differences between them and the sycamore are as has been said.)

[2.5] In Egypt there is another tree called the perseae, which in appearance is large and fair, and it most resembles the pear in leaves flowers branches and general form, but it is evergreen, while the other is deciduous. It bears abundant fruit and at every season, for the new fruit always overtakes that of last year. It ripens its fruit at the season of the etesian winds: the other fruit they gather somewhat unripe and store it. In size it is as large as a pear, but in shape it is oblong, almond-shaped, and its colour is grass-green. It has inside a stone like the plum, but much smaller and softer; the flesh is sweet and luscious and easily digested; for it does no hurt if one eats it in quantity. The tree has good roots as to length thickness and number. Moreover its wood is

strong and fair in appearance, black like the nettle-tree: out of it men make their images beds tables and other such things.

[2.6] The balanos gets its name from its fruit; its leaf is like that of the myrtle but it is longer. The tree is of a good stoutness and stature, but not of a good shape, being crooked. The perfumers use the husks of the fruit, which they bruise; for this is fragrant, though the fruit itself is useless. In size and appearance it is like the fruit of the caper; the wood is strong and useful for shipbuilding and other purposes.

[2.7] The tree called the doum-palm is like the datepalm; the resemblance is in the stem and the leaves, but it differs in that the date-palm is a tree with a single undivided stem, while the other, as it increases, splits and becomes forked, and then each of the two branches forks again: moreover the twigs are very short and not numerous. They use the leaf, like the palm-leaf, for plaiting. It has a peculiar fruit, very different from that of the date-palm in size form and taste; for in size it is nearly big enough to fill the hand, but it is round rather than long; the colour is yellowish, the flavour sweet and palatable. It does not grow bunched together, like the fruit of the datepalm, but each fruit grows separately; it has a large and very hard stone, out of which they turn the rings for embroidered bed-hangings. The wood is very different to that of the date-palm; whereas the latter is of loose texture fibrous and porous,- that of the doum-palm is close heavy and fleshy, and when split is exceedingly compact and hard. The Persians used to esteem it highly and made the feet of their couches out of it.

[2.8] The akanthia (acacia) is so called because the whole tree is spinous (akanthodes) except the stem; for it has spines on the branches shoots and leaves. It is of large stature, since lengths of timber for roofing of twelve cubits are cut from it. There are two kinds, the white and the black; the white is weak and easily decays, the black is stronger and less liable to decay; wherefore they use it in shipbuilding for the ribs. The tree is not very erect in growth. The fruit is in a pod, like that of leguminous plants, and the natives use it for tanning hides instead of gall. The flower is very beautiful in appearance, so that they make garlands of it, and it has medicinal properties, wherefore physicians gather it. Gum is also produced from it, which flows both when the tree is wounded and also of its own accord without any incision being made. When the tree is cut down, after the third year it immediately

shoots up again; it is a common tree, and there is a great wood of it in the Thebaid, where grow the oak, the persea in great abundance, and the olive.

[2.9] For the olive also grows in that district, though it is not watered by the river, being more than 300 furlongs distant from it, but by brooks; for there are many springs. The oil produced is not inferior to that of our country, except that it has a less pleasing smell, because it has not a sufficient natural supply of salt.' The wood of the tree is hard in character, and, when split, is like in colour to that of the nettle-tree.

[2.10] There is another tree, the (Egyptian) plum (sebesten), which is of great stature, and the character of its fruit is like the medlar (which it resembles in size), except that it has a round stone. It begins to flower in the month Pyanepsion, and ripens its fruit about the winter solstice, and it is evergreen. The inhabitants of the Thebaid, because of the abundance of the tree, dry the fruit; they take out the stones, bruise it, and make cakes of it.

[2.11] There is a peculiar bush which grows about Memphis, whose peculiarity does not lie in its leaves, shoots and general form, but in the strange property which belongs to it. Its appearance is spinous and the leaf is like ferns, but, when one touches the twigs, they say that the leaves as it were wither up and collapse and then after a time come to life again and flourish. Such are the most conspicuous things peculiar to the country, to speak only of trees or shrubs. For we will speak later of the things which grow in the river and the marshes, when we come to speak of the other water plants.

[2.12] All the trees of this kind in that country are large, both in height and stoutness; thus at Memphis there is said to be a tree of such girth that three men cannot embrace it. The wood too, when split, is good, being of extremely close grain and in colour like the nettle-tree.

[3.1] In Libya the lotos is most abundant and fairest; so also is the Christ's thorn, and in some parts, such as the Nasamonian district and near the temple of Zeus Ammon, the date-palm. In the Cyrenaica the cypress grows and the olives are fairest and the oil most abundant. Most special of all to this district is the silphium, and the land also bears abundant fragrant saffron-crocus. As to the lotos — the whole tree is peculiar, of good stature, as tall as a pear-tree, or nearly so; the leaf is divided and like that of the kermes-oak, and the wood is black. There are several sorts, which differ in their fruits; the fruit is as large as a bean, and in ripening like grapes it changes its colour: it grows, like

myrtle-berries, close together on the shoots; to eat, that which grows among the people called the Lotus-eaters is sweet pleasant and hamaless, and even good for the stomach; but that which has no stone is pleasanter (for there is also such a sort), and they also make wine from it.

[3.2] The tree is abundant and produces much fruit; thus the army of Ophelias,- when it was marching on Carthage, was fed, they say, on this alone for several days, when the provisions ran short. It is abundant also in the island called the island of the Lotus-eaters; this lies off the mainland at no great distance: it grows however in no less quantity, but even more abundantly on the mainland; for, as has been said,' this tree is common in Libya generally as well as the Christ's thorn; for in the islands called Euesperides they use these trees as fuel. However this lotos differs from that found in the land of the Lotus-eaters.

[3.3] The (Egyptian) Christ's thorn is more shrubby than the lotos; it has a leaf like the tree of the same name of our country, but the fruit is different; for it is not flat, but round and red, and in size as large as the fruit of the prickly cedar or a little larger; it has a stone which is not eaten with the fruit, as in the case of the pomegranate, but the fruit is sweet, and, if one pours wine over it, they say that it becomes sweeter and that it makes the wine sweeter.

[3.4] Some say that the lotos — is shrubby and much branched, though it has a stout stem; and that the stone in the fruit is large, while the outside is not fleshy but somewhat leathery; and that to eat it is not so much sweet as palatable; and that the wine which they make out of it does not keep more than two or three days, after which it gets sour; and so that the fruit found in the Lotus-eaters' country is sweeter, while the wood in the Cyrenaica is better; and that the country of the Lotus-eaters is hotter; and that the root is much blacker than the wood, but of less close grain, and of use for fewer purposes; for they use it only for dagger handles and tessellated work, while the wood is used for pipes and many other things.

[3.5] In the part of Libya where no rain falls they say that, besides many other trees, there grow tall and fine date-palms; however they add that, where the date-palm is found, the soil is salt and contains water, and that at no great depth, not more than three fathoms. They say also that the water is in some places quite sweet, but in others quite close by it is brackish; that where however other things grow, the soil is dry and waterless; and that in places

even the wells are a hundred fathoms deep, so that they draw water by means of a windlass worked by beasts. Wherefore it is wonderful how at any time digging to such depths was carried out. Such, they say, is the special character of the water supply which feeds the date-palms in the district also of the temple of Zeus Ammon. Further it is said that in the land where no rain falls thyme is abundant, and that there are various other peculiar plants there, and that there are found the hare gazelle ostrich and other animals. However it is uncertain whether these do not migrate in order to find drink somewhere, (for by reason of their fleetness they are able to appear at a distant place in a short space of time), especially if they can go for several days without drinking, even as these animals, when domesticated, are only given drink every third or fourth day. While as to other animals, such as snakes lizards and the like, it is plain that they go without drink. And we are told that according to the Libyans, these animals eat the wood-louse, which is of the same kind that is found also in our country, being black, with many feet, and rolling itself into a ball; this, they say, is extremely common and is juicy by nature.

[3.6] They say also that dew always falls abundantly in the land in which no rain falls, so that it is plain that the date-palm, as well as anything else which grows in waterless places, is kept alive by the moisture which rises from the ground, and also by the dew. For the latter is sufficient, considering the size of such trees and their natural character, which is dry and formed of dry components. And trees of that character are most abundant in, and most specially belong to such country. The character of the silphium we must discuss later.

[4.1] In different parts of Asia also there are special trees, for the soil of the various regions produces some but not others. Thus they say that ivy and olive do not grow in Asia in the parts of Syria which are five days' journey from the sea; but that in India ivy appears on the mountain called Meros, whence, according to the tale, Dionysus came. Wherefore it is said that Alexander, when he came back from an expedition, was crowned with ivy, himself and his army. But elsewhere in Asia it is said to grow only in Media, for that country seems in a way to surround and join on to the Euxine Sea. However, when Harpalus took great pains over and over again to plant it in the gardens of Babylon, and made a special point of it, he failed: since it could not live like the other things introduced from Hellas. The country then does not admit

this plant on account of the climate, and it grudgingly admits the box and the lime; for even these give much trouble to those engaged in the gardens. It also produces some peculiar trees and shrubs. And in general the lands of the East and South appear to have peculiar plants, as they have peculiar animals; for instance. Media and Persia have, among many others, that which is called the 'Median' or 'Persian apple' (citron). This tree has a leaf like to and almost identical with that of the andrachne, but it has thorns like those of the pear or white-thorn, which however are smooth and very sharp and strong. The 'apple' is not eaten, but it is very fragrant, as also is the leaf of the tree. And if the 'apple' is placed among clothes, it keeps them from being moth-eaten. It is also useful when one has drunk deadly poison; for being given in wine it upsets the stomach and brings up the poison; also for producing sweetness of breath; for, if one boils the inner part of the 'apple' in a sauce, or squeezes it into the mouth in some other medium, and then inhales it, it makes the breath sweet. The seed is taken from the fruit and sown in spring in carefully tilled beds, and is then watered every fourth or fifth day. And, when it is growing vigorously, it is transplanted, also in spring, to a soft well-watered place, where the soil is not too fine; for such places it loves. And it bears its apples at all seasons; for when some have been gathered, the flower of others is on the tree and it is ripening others. Of the flowers, as we have said, those which have, as it were, a distaff projecting in the middle are fertile, while those that have it not are infertile. It is also sown, like date-palms, in pots with a hole in them. This tree, as has been said, grows in Persia and Media.

[4.2] The Indian land has its so-called 'fig-tree' (banyan), which drops its roots from its branches every year, as has been said above; and it drops them, not from the new branches, but from those of last year or even from older ones; these take hold of the earth and make, as it were, a fence about the tree, so that it becomes like a tent, in which men sometimes even live. The roots as they grow are easily distinguished from the branches, being whiter hairy crooked and leafless.- The foliage above is also abundant, and the whole tree is round and exceedingly large. They say that it extends its shade for as much as two furlongs; and the thickness of the stem is in some instances more than sixty paces, while many specimens are as much as forty paces through. The leaf is quite as large as a shield, but the fruit is very small, only as large as a chick-pea, and it resembles a fig. And this is why the Greeks named this tree a

‘fig-tree.’ The fruit is curiously scanty, not only relatively to the size of the tree, but absolutely. The tree also grows near the river Akesines.

[4.3] There is also another tree which is very large and has wonderfully sweet and large fruit; it is used for food by the sages of India who wear no clothes. There is another tree whose leaf is oblong in shape, like the feathers of the ostrich; this they fasten on to their helmets, and it is about two cubits long. There is also another whose fruit is long and not straight, but crooked, and it is sweet to the taste. This causes griping in the stomach and dysentery; wherefore Alexander ordered that it should not be eaten. There is also another whose fruit is like the fruit of the cornelian cherry. There are also many more which are different to those found among the Hellenes, but they have no names. There is nothing surprising in the fact that these trees have so special a character; indeed, as some say, there is hardly a single tree or shrub or herbaceous plant, except quite a few, like those in Hellas. The ebony is also peculiar to this country; of this there are two kinds, one with good handsome wood, the other inferior. The better sort is rare, but the inferior one is common. It does not acquire its good colour by being kept, but it is natural to it from the first. The tree is bushy, like laburnum.

[4.4] Some say that a ‘terebinth’ grows there also, others that it is a tree like the terebinth; this in leaf twigs and all other respects resembles that tree, but the fruit is different, being like almonds. In fact they say that this sort of terebinth grows also in Bactria and bears nuts only as big as almonds, inasmuch as they are not large for the size of the tree; and they closely resemble almonds in appearance, except that the shell is not rough; and in palatableness and sweetness they are superior to almonds; wherefore the people of the country use them in preference to almonds.

[4.5] The trees from which they make their clothes have a leaf like the mulberry, but the whole tree resembles the wild rose. They plant them in the plains in rows, wherefore, when seen from a distance, they look like vines. Some parts also have many date-palms. So much for what come under the heading of ‘trees.’

[4.6] These lands bear also peculiar grains, some like those of leguminous plants, some like wheat and barley. For the chick-pea lentil and other such plants found in our country do not occur; but there are others, so that they make similar mashies, and one cannot, they say, tell the difference, unless one

has been told. They have however barley wheat and another kind of wild barley,- which makes sweet bread and good porridge. When the horses ate this, at first it proved fatal to them, but by degrees they became accustomed to it mixed with bran and took no hurt.

[4.7] But above all they sow the cereal called rice, of which they make their mash. This is like rice-wheat, and when bruised makes a sort of porridge, which is easily digested; in its appearance as it grows it is like darnel, and for most of its time of growth it is in water; however it shoots up not into an ear, but as it were into a plume, like the millet and Italian millet. There was another plant which the Hellenes called lentil; this is like in appearance to 'ox-horn' (fenugreek), but it is reaped about the setting of the Pleiades.

[4.8] Moreover this country shews differences in that part of it bears certain things which another part does not; thus the mountain country has the vine and olive and the other fruit-trees; but the olive is barren, and in its character it is as it were almost between a wild and a cultivated olive, and so it is also in its general appearance, and the leaf is broader than that of the one and narrower than that of the other. So much for the Indian land.

[4.9] In the country called Aria there is a 'thorn' on which is found a gum resembling myrrh in appearance and smell, and this drops when the sun shines on it. There are also many other plants besides those of our land, both in the country and in its rivers. In other parts there is a white 'thorn' which branches in three, of which they make batons and sticks; its wood is sappy and of loose texture, and they call it the thorn 'of Herakles.'

[4.10] There is another shrub as large as a cabbage, whose leaf is like that of the bay in size and shape. And if any animal should eat this, it is certain to die of it. Wherefore, whel'ever there were horses, they kept them under control.

[4.11] In Gedrosia they say that there grows one tree with a leaf like that of the bay, of which if the beasts or anything else ate, they very shortly died with the same convulsive symptoms as in epilepsy.

[4.12] And they say that another tree there is a sort of 'thorn' (spurge), and that this has no leaf and giows from a single root; and on each of its branches it has a very sharp spine, and if these are broken or bruised a quantity of juice flows out, which blinds animals or even a man, if any drops of it should fall on him. Also they say that in some parts grows a herb under which very small snakes lie coiled up, and that, if anyone treads on these and is bitten, he dies.

They also say that, if anyone should eat of unripe dates, he chokes to death, and that this fact was not discovered at first. Now it may be that animals and plants have such properties elsewhere also.

[4.13] Among the plants that grow in Arabia, Syria and India the aromatic plants are somewhat exceptional and distinct from the plants of other lands; for instance, frankincense, myrrh, cassia, balsam of Mecca, cinnamon and all other such plants, about which we have spoken at greater length elsewhere. So in the parts towards the east and south there are these special plants and many others besides.

[5.1] In the northern regions it is not so, for nothing worthy of record is mentioned except the ordinary trees which love the cold and are found also in our country, as fir, oak, silver-fir, box, chestnut, lime, as well as other similar trees. There is hardly any other besides these; but of shrubs there are some which for choice — seek cold regions, as centaury and wormwood, and further those that have medicinal properties in their roots and juices, such as hellebore, squirting cucumber, scammony, and nearly all those whose roots are gathered.

[5.2] Some of these grow in Pontus and Thrace, some about Oeta Parnassus Pelion Ossa and Telethrion, and in these parts some say that there is great abundance; so also is there in Arcadia and Laconia, for these districts too produce medicinal plants. But of the aromatic plants none grows in these lands, except the iris in Illyria on the shores of the Adriatic; for here it is excellent and far superior to that which grows elsewhere; but in hot places and those which face the south the fragrant plants grow, as if by contrast to the medicinal plants. And the warm places have also the cypress in greater abundance; for instance, Crete Lycia, Rhodes, while the prickly cedar grows in the Thracian and the Phrygian mountains.

[5.3] Of cultivated plants they say that those least able to thrive in cold regions are the bay and myrtle, especially the myrtle, and they give for proof that on Mount Olympus the bay is abundant, but the myrtle does not occur at all. In Pontus about Panticapaeum neither grows, though they are anxious to grow them and take special pains to do so for religious purposes. But there are many well grown fig-trees and pomegranates, which are given shelter; pears and apples are abundant in a great variety of forms and are excellent. These are springfruiting trees, except that they may fruit later here than elsewhere.

Of wild trees there are oak elm manna-ash and the like (while there is no fir silverfir nor Aleppo pine, nor indeed any resinous tree). But the wood of such trees in this country is damp and much inferior to that of Sinope, so that they do not much use it except for outdoor purposes. These are the trees of Pontus, or at least of certain districts of that country.

[5.4] In the land of Propontis myrtle and bay are found in many places on the mountains. Perhaps however some trees should be put down as special to particular places. For each district, as has been said, has different trees, differing not only in that the same trees occur but of variable quality, but also as to producing or not producing some particular tree. For instance, Tmolus and the Mysian Olympus have the hazel and chestnut in abundance, and also the vine apple and pomegranate; while Mount Ida has some of these not at all and others only in small quantity; and in Macedonia and on the Pierian Olympus some of these occur, but not others; and in Euboea and Magnesia the sweet chestnut is common, but none of the others is found; nor yet on Pelion or the other mountains of that region.

[5.5] Again it is only a narrow extent of country which produces wood fit for shipbuilding at all, namely in Europe the Macedonian region, and certain parts of Thrace and Italy; in Asia Cilicia Sinope and Amisus, and also the Mysian Olympus, and Mount Ida; but in these parts it is not abundant. For Syria has Syrian cedar, and they use this for their galleys.

[5.6] The like is true of trees which love water and the riverside; in the Adriatic region they say that the plane is not found, except near the Shrine of Diomedes, and that it is scarce throughout Italy; yet there are many large rivers in both countries, in spite of which the localities do not seem to produce this tree. At any rate those which King Dionysius the Elder planted at Rhegium in the park, and which are now in the grounds of the wrestling school and are thought much of, have not been able to attain any size.

[5.7] Some of these regions however have the plane in abundance, and others the elm and willow, others the tamarisk, such as the district of Mount Haemus. Wherefore such trees we must, as was said, take to be peculiar to their districts, whether they are wild or cultivated. However it might well be that the country should be able to produce some of these trees, if they were carefully cultivated: this we do in fact find to be the case with some plants, as with some animals.

[6.1] However the greatest difference in the natural character itself of trees and of tree-like plants generally we must take to be that mentioned already, namely, that of plants, as of animals, some belong to the earth, some to water. Not only in swamps, lakes and rivers, but even in the sea there are some tree-like growths, and in the ocean there are even trees. In our own sea all the things that grow are small, and hardly any of them rise above the surface; but in the ocean we find the same kinds rising above the surface, and also other larger trees.

[6.2] Those found in our own waters are as follows: most conspicuous of those which are of general occurrence are seaweed, oyster-green and the like; most obvious of those peculiar to certain parts are the sea-plants called 'fir' 'fig' 'oak' 'vine' 'palm.' Of these some are found close to land, others in the deep sea, others equally in both positions. And some have many forms, as seaweed, some but one. Thus of seaweed there is the broad-leaved kind, riband-like — and green in colour, which some call 'green-weed' and others 'girdle-weed.' This has a root which on the outside is shaggy, but the inner part is made of several coats, and it is fairly long and stout, like kromyogeteion (a kind of onion).

[6.3] Another kind has hair-like leaves like fennel, and is not green but pale yellow; nor has it a stalk, but it is, as it were, erect in itself; this grows on oyster-shells and stones, not, like the other, attached to the bottom; but both are plants of the shore, and the hair-leaved kind grows close to land, and sometimes is merely washed over by the sea; while the other is found further out.

[6.4] Again in the ocean about the pillars of Heracles there is a kind of marvellous size, they say, which is larger, about a palmsbreadth. This is carried into the inner sea along with the current from the outer sea, and they call it 'sea-leek' (riband-weed); and in this sea in some parts it grows higher than a man's waist. It is said to be annual. and to come up at the end of spring, and to be at its best in summer, and to wither in autumn, while in winter it perishes and is thrown up on shore. Also, they say, all the other plants of the sea become weaker and feebler in winter. These then are, one may say, the sea-plants which are found near the shore. But the 'seaweed of ocean,' which is dived for by the sponge-fishers, belongs to the open sea.

[6.5] In Crete there is an abundant and luxuriant growth on the rocks close to

land, with which they dye not only their ribbons, but also wool and clothes. And, as long as the dye is fresh, the colour is far more beautiful than the purple dye; it occurs on the north coast in greater abundance and fairer, as do the sponges and other such things.

[6.6] There is another kind like dog's-tooth grass; the leaf is very like, the root is jointed and long, and grows out sideways, like that of that plant; it has also a reedy stalk like the same plant, and in size it is much smaller than ordinary seaweed.

[6.7] Another kind is the oyster-green, which has a leaf green in colour, but broad and not unlike lettuce leaves; but it is more wrinkled and as it were crumpled. It has no stalk, but from a single starting-point grow many of the kind, and again from another starting-point. These things grow on stones close to land and on oyster-shells. These are about all the smaller kinds.

[6.8] The 'sea-oak' and 'sea-fir' both belong to the shore; they grow on stones and oyster-shells, having no roots, but being attached to them like limpets. Both have more or less fleshy leaves; but the leaf of the 'fir' grows much longer and stouter, and is not unlike the pods of pulses, but is hollow inside and contains nothing in the 'pods.' That of the 'oak' is slender and more like the tamarisk; the colour of both is purplish. The whole shape of the 'fir' is erect, both as to the stem and the branches, but that of the 'oak' is less straight and the plant is broader. Both are found both with many stems and with one, - but the 'fir' is more apt to have a single stem. The branchlike outgrowths in the 'fir' are long straight and spreading, while in the 'oak' they are shorter less straight and closer. The whole size of either is about a cubit or rather more, but in general that of the 'fir' is the longer. The 'oak' is useful to women for dyeing wool. To the branches are attached certain creatures with shells, and below they are also found attached to the stem itself, which in some cases they completely cover; and among these are found millepedes and other such creatures, including the one which resembles a cuttlefish.

[6.9] These plants occur close to land and are easy to observe; but some report that there is another 'sea oak' which even bears fruit and has a useful 'acorn,' and that the sponge fishers and divers told them that there were other large kinds.

[6.10] The 'sea-vine' grows under both conditions, both close to land and in the deep sea; but the deep sea form has larger leaves branches and fruit.

[6.11] The 'sea-fig' is leafless and not of large size, and the colour of the bark is red. The 'sea-palm' is a deep-sea plant, but with a very short stem, and the branches which spring from it are almost straight; and these under water are not set all round the stem, like the twigs which grow from the branches, but extend, as it were, quite flat in one direction, and are uniform; though occasionally they are irregular. The character of these branches or outgrowths to some extent resembles the leaves of thistle-like spinous plants, such as the sow-thistles — and the like, except that they are straight and not bent over like these, and have their leaves eaten away by the brine; in the fact that the central stalk at least runs through the whole, they resemble these, and so does the general appearance. The colour both of the branches and of the stalks and of the plant as a whole is a deep red or scarlet. Such are the plants found in this sea. For sponges and what are called aplysiai and such-like growths are of a different character.

[7.1] In the outer sea near the pillars of Heracles grows the 'sea-leek,' as has been said; also the well known 'plants which turn to stone, as thyma, the plants like the bay and others. And in the sea called the Red Sea a little above Coptos in Arabia there grows on the land no tree except that called the 'thirsty' acacia, and even this is scarce by reason of the heat and the lack of water; for it never rains except at intervals of four or five years, and then the rain comes down heavily and is soon over.

[7.2] But there are plants in the sea, which they call 'bay' and 'olive' (white mangrove). In foliage the 'bay' is like the aria (holm-oak), the 'olive' like the real olive. The latter has a fruit like olives, and it also discharges a gum, from which the physicians compound a drug for stanching blood, which is extremely effective. And when there is more rain than usual, mushrooms grow in a certain place close to the sea, which are turned to stone by the sun. The sea is full of beasts, and produces sharks in great numbers, so that diving is impossible.

[7.3] In the gulf called 'the Gulf of the Heroes,' to which the Egyptians go down, there grow a 'bay,' an 'olive,' and a 'thyme'; these however are not green, but like stones so far as they project above the sea, but in leaves and shoots they are like their green namesakes. In the 'thyme' the colour of the flower is also conspicuous, looking as though the flower had not yet completely developed. These treelike growths are about three cubits in height.

[7.4] Now some, referring to the occasion when there was an expedition of those returning from India sent out by Alexander, report that the plants which grow in the sea, so long as they are kept damp, have a colour like sea-weeds, but that when they are taken out and put in the sun, they shortly become like salt. They also say that rushes of stone grow close to the sea, which none could distinguish at sight from real rushes. They also report a more marvellous thing than this; they say that there are certain tree-like growths which in colour resemble an ox-horn, but whose branches are rough, and red at the tip; these break if they are doubled up, and some of them, if they are cast on a fire, become red-hot like iron, but recover when they cool and assume their original colour.

[7.5] On the islands which get covered by the tide they say that great trees grow, as big as planes or the tallest poplars, and that it came to pass that, when the tide came up, while the other things were entirely buried, the branches of the biggest trees projected and they fastened the stem cables to them, and then, when the tide ebbed again, fastened them to the roots. And that the tree has a leaf like that of the bay, and a flower like gilliflowers in colour and smell, and a fruit the size of that of the olive, which is also very fragrant. And that it does not shed its leaves, and that the flower and the fruit form together in autumn and are shed in spring.

[7.6] Also they say there are plants which actually grow in the sea, which are evergreen and have a fruit like lupins.

[7.7] In Persia in the Carmanian district, where the tide is felt, there are trees of fair size like the andrachne in shape and in leaves; and they bear much fruit like in colour to almonds on the outside, but the inside is coiled up as though the kernels were all united. These trees are all eaten away up to the middle by the sea and are held up by their roots, so that they look like a cuttle-fish. For one may see this at ebb-tide. And there is no rain at all in the district, but certain channels are left, along which they sail, and which are part of the sea. Which, some think, makes it plain that the trees derive nourishment from the sea and not from fresh water, except what they draw up with their roots from the land. And it is reasonable to suppose that this too is brackish; for the roots do not run to any depth. In general they say that the trees which grow in the sea and those which grow on the land and are overtaken by the tide are of the same kind, and that those which grow in the sea are small and look like

seaweed, while those that grow — on land are large and green and have a fragrant flower and a fruit like a lupin.

[7.8] In the island of Tylos which is situated in the Arabian gulf, they say that on the east side there is such a number of trees when the tide goes out that they make a regular fence. All these are in size as large as a fig-tree, the flower is exceedingly fragrant, and the fruit, which is not edible, is like in appearance to the lupin. They say that the island also produces the 'wool-bearing' tree (cotton-plant) in abundance. This has a leaf like that of the vine, but small, and bears no fruit; but the vessel in which the 'wool' is contained is as large as a spring apple, and closed, but when it is ripe, it unfolds and puts forth the 'wool,' of which they weave their fabrics, some of which are cheap and some very expensive.

[7.9] This tree is also found, as was said, - in India as well as in Arabia. They say that there are other trees with a flower like the gilliflower, but scentless and in size four times as large as that flower. And that there is another tree with many leaves like the rose, and that this closes at night, but opens at sunrise, and by noon is completely unfolded; and at evening again it closes by degrees and remains shut at night, and the natives say that it goes to sleep. Also that there are date-palms on the island and vines and other fruit-trees, including evergreen figs. Also that there is water from heaven, but that they do not use it for the fruits, but that there are many springs on the island, from which they water everything, and that this is more beneficial to the corn and the trees. Wherefore, even when it rains, they let this water over the fields, as though they were washing away the rain water. Such are the trees as so far observed which grow in the outer sea.

[8.1] Next we must speak of plants which live in rivers marshes and lakes. Of these there are three classes, trees, plants of 'herbaceous' character, and plants growing in clumps. By 'herbaceous' I mean here such plants as the marsh celery and the like; by 'plants growing in clumps' I mean reeds, galingale, phleo, rush sedge — which are common to almost all rivers and such situations.

[8.2] And in some such places are found brambles Christ's thorn and other trees, such as willow, abele, plane. Some of these are water plants to the extent of being submerged, while some project a little from the water; of some again the roots and a small part of the stem are under water, but the rest of the

body is altogether above it. This is the case with willow alder plane lime, and all water-loving trees.

[8.3] These too are common to almost all rivers, for they grow even in the Nile. However the plane is not abundant by rivers, while the abele is even more scarce, and the manna-ash and ash are commonest. At any rate of those that grow in Egypt the list is too long to enumerate separately; however, to speak generally, they are all edible and have sweet flavours. But they differ in sweetness, and we may distinguish also three as the most useful for food, namely the papyrus, the plant called sari, and the plant which they call mnasion.

[8.4] The papyrus does not grow in deep water, but only in a depth of about two cubits, and sometimes shallower. The thickness of the root is that of the wrist of a stalwart man, and the length above four cubits; it grows above the ground itself, throwing down slender matted roots into the mud, and producing above the stalks which give it its name 'papyrus'; these are three-cornered and about ten cubits long, having a plume which is useless and weak, and no fruit whatever; and these stalks the plant sends up at many points. They use the roots instead of wood, not only for burning, but also for making a great variety of articles; for the wood is abundant and good. The 'papyrus' itself- is useful for many purposes; for they make boats from it, and from the rind they weave sails mats a kind of raiment coverlets ropes and many other things. Most familiar to foreigners are the papyrus-rolls made of it; but above all the plant also is of very great use in the way of food. For all the natives chew the papyrus both raw boiled and roasted: they swallow the juice and spit out the quid. Such is the papyrus and such its uses. It grows also in Syria about the lake in which grows also sweetflag; and Antigonus made of it the cables for his ships.

[8.5] The sari grows in the water in marshes and plains, when the river has left them; it has a hard twisted root, and from it grow what they call the saria; these are about two cubits long and as thick as a man's thumb; this stalk too is threecornered, like the papyrus, and has similar foliage. This also they chew, spitting out the quid; and smiths use the root, for it makes excellent charcoal, because the wood is hard. Mnasion is herbaceous, so that it has no use except for food.

[8.6] Such are the plants which excel in sweetness of taste. There is also

another plant which grows in the marshes and lakes, but which does not take hold of the ground; in character it is like a lily, but it is more leafy, and has its leaves opposite to one another, as it were in a double row; the colour is a deep green. Physicians use it for the complaints of women and for fractures.

[8.7] Now these plants grow in the river, unless the stream has thrown them up on land; it sometimes happens that they are borne down the stream, and that then other plants grow from them. But the 'Egyptian bean' grows in the marshes and lakes; the length of its stalk at longest is four cubits, it is as thick as a man's finger, and resembles a pliant reed without joints. Inside it has tubes which run distinct from one another right through, like a honey-comb: on this is set the 'head,' which is like a round wasps' nest, and in each of the cells is a 'bean,' which slightly projects from it; at most there are thirty of these. The flower is twice as large as a poppy's, and the colour is like a rose, of a deep shade; the 'head' is above the water. Large leaves grow at the side of each plant, equal in size to a Thessalian hat; these have a stalk exactly like that of the plant. If one of the 'beans' is crushed, you find the bitter substance coiled up, of which the pilos is made. So much for the fruit. The root is thicker than the thickest reed, and is made up of distinct tubes, like the stalk. They eat it both raw, boiled, and roasted, and the people of the marshes make this their food. It mostly grows of its own accord; however they also sow it in the mud, having first well mixed the seed with chaff, so that it may be carried down and remain in the ground without being rotted; and so they prepare the 'bean' fields, and if the plant once takes hold it is permanent. For the root is strong and not unlike that of reeds, except that it is prickly on the surface. Wherefore the crocodile avoids it, lest he may strike his eye on it, since he has not sharp sight. This plant also grows in Syria and in parts of Cilicia, but these countries cannot ripen it; also about Torone in Chalcidice in a certain lake of small size; and this lake ripens it perfectly and matures its fruit.

[8.8] The plant called the lotos (Nile water-lily) grows chiefly in the plains when the land is inundated. The character of the stalk of this plant is like that of the 'Egyptian bean,' and so are the 'hat-like' leaves, except that they are smaller and slenderer. And the fruit grows on the stalk in the same way as that of the 'bean.' The flower is white, resembling in the narrowness of its petals those of the lily, but there are many petals growing close one upon another. When the sun sets, these close and cover up the 'head,' but with sunrise they

open and appear above the water. This the plant does until the 'head' is matured and the flowers have fallen off. The size of the 'head' is that of the largest poppy, and it has grooves all round it in the same way as the poppy, but the fruit is set closer in these. This is like millet. — In the Euphrates they say that the 'head' and the flowers sink and go under water in the evening till midnight, and sink to a considerable depth; for one can not even reach them by plunging one's hand in; and that after this, when dawn comes round, they rise and go on rising towards day-break, being visible above the water when the sun appears; and that then the plant opens its flower, and, after it is open, it still rises; and that it is a considerable part which projects above the water. These 'heads' the Egyptians heap together and leave to decay, and when the 'pod' has decayed, they wash the 'head' in the river and take out the 'fruit,' and, having dried and pounded it, they make loaves of it, which they use for food. The root of the lotos is called korsion, and it is round and about the size of a quince; it is enclosed in a black 'bark,' like the shell of a chestnut. The inside is white; but when it is boiled or roasted, it becomes of the colour of the yolk of an egg and is sweet to taste. The root is also eaten raw, though it is best when boiled in water or roasted. Such are the plants found in water.

[8.9] In sandy places which are not far from the river there grows under ground the thing called malinathalle; this is round in shape and as large as a medlar, but has no stone and no bark. It sends out leaves like those of galingale. These the people of the country collect and boil in beer made from barley, and they become extremely sweet, and all men use them as sweetmeats.

[8.10] All the things that grow in such places may be eaten by oxen and sheep, but there is one kind of plant which grows in the lakes and marshes which is specially good for food: they graze their cattle on it when it is green, and also dry it and give it in the winter to the oxen after their work; and these keep in good condition when they have no other kind of food.

[8.11] There is also another plant which comes up of its own accord among the corn; this, when the harvest is cleared, they crush slightly and lay during the winter on moist ground; when it shoots, they cut and dry it and give this also to the cattle and horses and beasts of burden with the fruit which forms on it. The fruit in size is as large as sesame, but round and green in colour, and exceedingly good. Such one might take to be specially remarkable plants of

Egypt.

[9.1] Every river seems to bear some peculiar plant, just as does each part of the dryland. For not even the water-chestnut grows in all rivers nor everywhere, but only in marshy rivers, and only in those whose depth is not more or not much more than five cubits, as the Strymon. (In rivers of such a depth grow also reeds and other plants.) No part of it projects from the water except just the leaves; these float as it were and conceal the 'chestnut' which is itself under water and bends down towards the bottom.

[9.2] The leaf is broad, like that of the elm, and has a very long stalk. The stem is thickest at the top, whence spring the leaves and the fruit; below it gets thinner down to the root. It has springing from it hair-like growths, most of which are parallel to each other, but some are irregular; below, starting from the root, they are large, but, as one gets higher up the plant, they become smaller, so that those at the top are quite small and there is a great contrast between the root and the top where the fruit grows. The plant also has on the same stalk several sidegrowths; of these there are three or four, and the largest is always that which is nearer to the root, the next largest is the one next above it, and so on in proportion: this sidegrowth is like another stalk, but slenderer than the original one, though like that it has leaves and fruit. The fruit is black and extremely hard. The size and character of the root are matter for further enquiry. Such is the character of this plant. It grows from the fruit which falls, and begins to grow in spring. Some say that it is annual, others that the root persists for a time, and that from it grows the new stalk. This then is matter for enquiry. However quite peculiar to this plant is the hair-like character of the growths which spring from the stalk; for these are neither leaves nor stalk; though reeds and other things have also sidegrowths.

[10.1] Plants peculiar to particular places must be considered separately, while a general account may be given of those which are generally distributed.' But even the latter must be classified according to locality; thus some belong to marshes, others to lakes, others to rivers, or again others may be common to all kinds of locality: we must also distinguish which occur alike in wet and in dry ground, and which only in wet ground, marking these off in a general way from those mentioned above as being most impartial.

[10.2] Now in the lake near Orchomenos grow the following trees and woody plants: willow goat-willow water-lily reeds (both that used for making pipes

and the other kind) galingale, phleos, bulrush; and also 'moon-flower' duckweed and the plant called maretail: as for the plant called water-chickweed the greater part of it grows under water.

[10.3] Now of these most are familiar: the goat-willow water-lily 'moon-flower' duckweed and maretail probably grow also elsewhere, but are called by different names. Of these we must speak. The goat-willow is of shrubby habit and like the chastetree: its leaf resembles that leaf in shape, but it is soft like that of the apple,- and downy. The bloom is like that of the abele, but smaller, and it bears no fruit. It grows chiefly on the floating islands; (for here too there are floating islands, as in the marshes of Egypt, in Thesprotia, and in other lakes). When it grows under water, it is smaller. Such is the goat-willow.

[10.4] The water-lily is in shape like the poppy. For the top of it has this character, being shaped like the pomegranate flower, but it is longer in proportion to the size of the plant. Its size in fact as a whole is that of an apple; but it is not bare, having round it white membranes, and attached to these on the outside are grass-green 'leaves,' like those of roses when they are still in bud, and of these there are four; when it is opened it shews its seeds, which are red; in shape however they are not like pomegranate seeds, but round small and not much longer than millet seeds; the taste is insipid, like that of wheat-grains. It ripens in summer and has a long stalk. The flower is like a rose-bud, but larger, almost twice as large. Now this and the leaf float on the water: but later, when the bloom is over and the fruit-case has formed, they say that it sinks deeper into the water, and finally reaches the bottom and sheds its fruit.

[10.5] Of the plants of the lake they say that water-lily sedge and phleos bear fruit, and that that of the sedge is black, and in size like that of the water-lily. The fruit of phleos is what is called the 'plume,' and it is used as a soap-powder. It is something like a cake, soft and reddish. Moreover the 'female' plant both of phleos and sedge is barren, but useful for basket-work,- while the 'male' is useless. Duckweed 'moon-flower' and maretail require further investigation.

[10.6] Most peculiar of these plants is the bulrush, both in being leafless and in not having so many roots as the others; for the others tend downwards quite as much as upwards, and shew their strength in that direction; and especially is this true of galingale, and also of dog's-tooth grass; wherefore these plants

too and all others like them are hard to destroy. The root of galingale exceeds all the others in the diversity of characters which it shews, in that part of it is stout and fleshy, part slender and woody. So also is this plant peculiar in its way of shooting and originating; for from the trunk-like stock grows another slender root sideways, and on this again forms the fleshy part which contains the shoot from which the stalk springs. In like manner it also sends out roots downwards; wherefore of all plants it is hardest to kill, and troublesome to get rid of.

[10.7] (Dog's-tooth grass grows in almost the same way from the joints; for the roots are jointed, and from each joint it sends a shoot upwards and a root downwards. The growth of the spinous plant called corn-thistle is similar, but it is not reedy and its root is not jointed. We have enlarged on these matters because of the resemblance.)

[10.8] The willow and the reed (not however the reed used for pipes), galingale, bulrush, phleos, sedge grow both on land and in the water, water-lily only in the water. (As to bulrush indeed there is a difference of opinion.) However they say that those plants which grow in the water are always finer and larger than those that grow in both positions; also that some of these plants grow also on the floating islands,- for instance galingale sedge and phleos; thus all parts of the lake contain these plants.

[10.9] Of the plants of the lake the parts good for food are as follows: of the water-lily both the flower and the leaves are good for sheep, the young shoots for pigs, and the fruit for men. Of phleos, galingale, and sedge the part next the roots is tender, and is mostly eaten by children. The root of phleos is the only part which is edible by cattle. When there is a drought and there is no water from overhead, all the plants of the lake are dried up, but especially the reed; of this it remains to speak, since we have said almost enough about the rest.

[11.1] Of the reed there are said to be two kinds, the one used for making pipes and the other kind. For that of the latter there is only one kind, though individual plants differ in being strong and stout, 'or on the other hand slender and weak. The strong stout one they call the 'stake-reed,' the other the 'weaving reed.' The latter they say grows on the floating islands, the stout form in the 'reed-beds'; this name they give to the places where there is a thick mass of reed with its roots entangled together. This occurs in any part of

the lake where there is rich soil. It is said that the 'stake-reed' is also sometimes found in the same places as the reed used for pipes, in which places it is longer than the 'stakereed' found elsewhere, but gets worm-eaten. These then are the differences in reeds of which they tell.

[11.2] As to the reed used for pipes, it is not true, as some say, that it only grows once in nine years and that this is its regular rule of growth; it grows in general whenever the lake is full: but, because in former days this was supposed to happen generally once in nine years, they made the growth of the reed to correspond, taking what was really an accident to be a regular principle. As a matter of fact it grows whenever after a rainy season the water remains in the lake for at least two years,- and it is finer if the water remains longer; this is specially remembered to have happened in recent times at the time of the battle of Chaeronea. For before that period they told me that the lake was for several years deep; and, at a time later than that, when there was a severe visitation of the plague, it filled up; but, as the water did not remain but failed in winter, the reed did not grow; for they say, apparently with good reason, that, when the lake is deep, the reed increases in height, and, persisting for the next year, matures its growth; and that the reed which thus matures is suitable for making a reed mouthpiece, while that for which the water has not remained is suitable for making a 'cap.' Such then, it is said, is the reed's way of growth.

[11.3] Also it is said to differ from other reeds, to speak generally, in a certain luxuriance of growth, being of a fuller and more fleshy character, and, one may say, 'female' in appearance. For it is said that even the leaf is broader and whiter, though the plume is smaller than that of other reeds, and some have no plume at all; these they call 'eunuch-reeds.' From these they say that the best mouthpieces are made, though many are spoiled in the making.

[11.4] Till the time of Antigenidas, before which men played the pipe in the simple style, they say that the proper season for cutting the reeds was the month Boedromion about the rising of Arcturus; for, although the reed so cut did not become fit for use for many years after and needed a great deal of preliminary placing upon, yet the opening of the reed-tongues is well closed, which is a good thing for the purpose of accompaniment. But when a change was made to the more elaborate style of playing, the time of cutting the reeds was also altered; for in our own time they cut them in the months

Skirrophorion or Hekatombaion about the solstice or a little earlier. And they say that the reed becomes fit for use in three years and needs but little preliminary playing upon, and that the reed-tongues have ample vibration, which is essential for those who play in the elaborate style. Such, they tell us, are the proper seasons for cutting the reed used for the reed mouthpiece.

[11.5] The manufacture is carried out in the following manner. Having collected the reed-stems they lay them in the open air during the winter, leaving on the rind; in the spring they strip this off, and, having rubbed the reeds thoroughly, put them in the sun. Later on, in the summer, they cut the sections from knot to knot into lengths and again put them for some time in the open air. They leave the upper knot on this internodal section -; and the lengths thus obtained are not less than two palmsbreadths long. Now they say that for making mouthpieces the best lengths are those of the middle of the reed, whereas the lengths towards the upper growths make very soft mouthpieces and those next to the root very hard ones. They say too that the reed-tongues made out of the same length are of the same quality, while those made from different lengths are not; also that the one from the length next to the root forms a left-hand reed-tongue, and that from the length towards the upper growths a righthand reed-tongue. Moreover, when the length is slit, the opening of the reed-tongues in either case is made towards the point at which the reed was cut; and, if the reed-tongues are made in any other manner, they are not quite of the same quality. Such then is the method of manufacture.

[11.6] This reed grows in greatest abundance between the Kephisos and the Melas; this district is called Pelekania, and in it are certain 'pots,' as they are called, which are deep holes in the marsh,- and in these holes they say that it grows fairest; it is also said to be found where the river called the Probatia (Sheep) comes down, which is a stream that flows from Lebadeia. But it appears to grow fairest of all near 'Sharp Bend'; this place is the mouth of the Kephisos; near it is a rich plain called Hippias. There is another region north of the Sharp Bend called Boedrias; and here too they say that the reed grows fine, and in general that it is fairest wherever there is a piece of land with deep rich alluvial soil, where also Kephisos mingles his waters with the soil, and where there is further a deep hole in the marsh; for that about the Sharp Bend and Boedrias all these conditions are found. As proof that the Kephisos has a great effect in producing the reed of good quality they have the fact that,

where the river called the 'Melas' flows into the marsh, though the marsh is there deep and the bottom of good alluvial soil, it either does not grow at all or at best but of poor quality. Let this suffice for an account of the growth and character of the reed used for pipes, of the manufacture, and of its distinctive features as compared with other reeds.

[11.7] But these are not the only kinds of reed; there are several others with distinctive characters which are easily recognised; there is one that is of compact growth in flesh and has its joints close together; another that is of open growth, with few joints; there is the hollow reed called by some the 'tubereed' inasmuch as it has hardly any wood or flesh; there is another which is solid and almost entirely filled with substance; there is another which is short, and another which is of strong growth tall and stout; there is one which is slender and has many leaves, another which has few leaves or only one. And in general there are many differences in natural character and in usefulness, each kind being useful for some particular purpose.

[11.8] Some distinguish the various kinds by different names; commonest perhaps is the pole-reed, which is said to be of very bushy habit, and to grow chiefly by rivers and lakes. And it is said that there is a wide difference in reeds in general between those that grow on dry land and those that grow in the water. Quite distinct again is the 'archer's' reed, which some call the 'Cretan': this has few joints and is fleshier than any of the others; it can also be most freely bent, and in general, when warmed, may be turned about as one pleases.

[11.9] The various kinds have also, as was said, great differences in the leaves, not only in number and size, but also in colour. That called the 'Laconian' reed is parti-coloured. They also differ in the position and attachment of the leaves; some have most of their leaves low down, and the reed itself grows out of a sort of a bush. Indeed some say that this may be taken as the distinctive character of those which grow in lakes, namely, that these have many leaves, and that their foliage in a manner resembles that of galingale, phleas, thryon, and sedge; but this needs further enquiry.

[11.10] There is also a kind of reed (bush-grass) which grows on land, and which is not erect, but sends out its stem over the ground, like the dog's-tooth grass, and so makes its growth. The 'male' reed is solid: some call it eiletias.

[11.11] The Indian reed (bamboo) is very distinct, and as it were a totally

different kind; the 'male' is solid and the 'female' hollow (for in this kind too they distinguish a 'male' and a 'female' form); a number of reeds of this kind grow from one base and they do not form a bush; the leaf is not long, but resembles the willow leaf; these reeds are of great size and of good substance, so that they are used for javelins. They grow by the river Akesines. All reeds are tenacious of life, and, if cut or burnt down, grow up again more vigorously; also their roots are stout and numerous, so that the plant is hard to destroy. The root is jointed, like that of the dogstooth grass, but this is not equally so in all kinds. However let this suffice for an account of reeds.

[12.1] It remains to speak of the rush,- as though it belonged to this class of plants, inasmuch as we must reckon this also among water plants. Of this there are three kinds, as some distinguish, the 'sharp' rush, which is barren and is called the male'; the 'fruiting' kind which we call the 'black head' because it has black fruit; this is stouter and fleshier: and third the 'entire rush' as it is called, which is distinguished by its size, stoutness and fleshiness.

[12.2] Now the 'black-head' grows by itself, but the 'sharp' rush and the 'entire' rush grow from the same stock, which seems extraordinary, and indeed it was strange to see it when the whole clump of rushes was brought before me; for from the same stock there were growing 'barren' rushes, which were the most numerous, and also a few 'fruiting' ones. This then is a matter for further enquiry. The 'fruiting' — ones are in general scarcer, for the 'entire rush' is more useful for wicker-work because of its fleshiness and pliancy. The 'fruiting' rush in general produces a club-like head which swells straight from the wiry stem, and then bears egg-like bodies; for attached to a single wiry base it has its very spike-like branches all round it, and on the ends of these it has its round vessels borne laterally and gaping ' ; in each of these is the small seed, which is pointed and black, and like that of the Michaelmas daisy, except that it is less solid. It has a long root, which is stouter than that of the ordinary rush; this withers every year, and then another strikes down again from the 'head' of the plant. And it is easy to observe that some of the roots as they are let down are withered, some green. The 'head' is like that of an onion or long onion, being, as it were, made up of several united together; it is broad, and underneath it has reddish scales. Now it is a peculiar fact about the roots of this plant that they wither every year and that the fresh growth of

roots comes from the part of the plant which is above ground. Such is the character of rushes.

[12.3] Bramble and Christ's thorn may be considered to some extent plants of the water or the waterside, as they are in some districts; but the distinctive characters of these plants are fairly clear, for we have spoken of both already.

[12.4] The floating islands of Orchomenos — are of various sizes, the largest being about three furlongs in circumference. But in Egypt very large ones form, so that even a number of boars are found in them, and men go across to the islands to hunt them. Let this account of water-plants suffice.

[13.1] As to the comparative shortness of life of plants and trees of the water we may say thus much as a general account, that, like the water-animals, they are shorter-lived than those of the dry land. But we must enquire into the lives of those of the dry land severally. Now the woodmen say that the wild kinds are almost without exception long-lived, and none of them is short-lived: so far they may be speaking the truth; all such plants do live far longer than others. However, just as in the case of cultivated plants, some are longer-lived than others, and we must consider which these are. Cultivated plants plainly differ as to the length of their lives, but, to speak generally, wild plants are longer-lived than cultivated ones, both taken as classes, and also when one compares the wild and cultivated forms of particular plants: thus the wild olive pear and fig are longer-lived than the corresponding cultivated trees; for the wild forms of these are stronger and of closer growth, and they do not produce such well developed fruit-pulp.

[13.2] To the long-lived character of some plants, both cultivated and wild, witness is borne also by the tales handed down in mythology, as of the olive at Athens, the palm in Delos, and the wild olive at Olympia, from which the wreaths for the games are made; or again of the Valonia oaks at Ilium, planted on the tomb of Ilos. Again some say that Agamemnon planted the plane at Delphi, and the one at Kaphyai in Arcadia. Now how this is may perhaps be another story, but anyhow it is plain that there is a great difference between trees in this respect; the kinds that have been mentioned, and many others besides, are long-lived, while the following are admittedly short-lived — pomegranate, fig, apple: and among apples the 'spring' sort and the 'sweet' apple are shorter-lived than the 'sour' apple, even as the 'stoneless' pomegranate is shorter-lived than the other kinds. Also some kinds of vine are

shortlived, especially those which bear much fruit; and it appears that trees which grow by water are shorter-lived than those which live in dry places: this is true of willow, abele, elder, and black poplar.

[13.3] Some trees, though they grow old and decay quickly, shoot up again from the same stock, as bay apple pomegranate and most of the water-loving trees. About these one might enquire whether one should call the new growth the same tree or a new one; to take a similar case, if, after cutting down the trunk, one should, as the husbandmen do, encourage — the new shoots to grow again, or if one should cut the tree right down to the roots and burn the stump, (for these things are commonly done, and they also sometimes occur naturally); are we then here too, to call the new growth the same tree, or another one? In so far as it is always the parts of the tree which appear to alternate their periods of growth and decay and also the prunings which they themselves thus make, so far the new and the old growth might seem to be the same tree; for what difference can there be in the one as compared with the other? On the other hand, in so far as the trunk would seem to be above all the essential part of the tree, which gives it its special character, when this changes, one might suppose that the whole tree becomes something different — unless indeed one should lay down that to have the same starting-point constitutes identity; whereas it often happens that the roots too are different and undergo a change, since some decay and others grow afresh. For if it be true, as some assert, that the reason why the vine is the longest lived of trees, is that, instead of producing new roots, it always renews itself from the existing ones, such an illustration must surely lead to an absurd conclusion, unless we assume that the stock persists, as it must do, since it is, as it were, the fundamental and essential part of a tree. However it cannot matter much for our present purpose which account is the right one. Perhaps we may say that the longest-lived tree is that which in all ways is able to persist, as does the olive by its trunk, by its power of developing sidegrowth, and by the fact that its roots are so hard to destroy. It appears that the life of the individual olive (in regard to which one should make the trunk the essential part and standard in estimating the time), lasts for about two hundred years. But if it is true of the vine, as some say, that, if the roots are partly removed, the trunk is able to survive, and the whole character of the tree remains the same and produces like fruits for any period, however long, then the vine will be the

longest-lived of all trees. They say that, when the vine seems to be deteriorating, this is what one should do: — one should encourage the growth of branches and gather the fruit that year: and after that one should dig on one side of the vine and prune away all the roots on that side, and then fill the hole with brushwood and heap up the soil. In that year, they say, the vine bears very badly, but better in the next, while in the third and fourth it becomes normal again and bears many fair clusters, so that it is quite as good as when it was in its prime. And when it goes off again, they say one should dig on the other side and apply the same treatment; and that so treated the tree lasts for ever; and this should be done at intervals of about ten years. And this is why those who adopt this treatment never cut down the vine, but the same stems remain for many generations, so that even those who planted the trees cannot remember doing so. However perhaps one should enquire of those who have had experience before accepting this statement. These examples may serve for considering which trees are long-lived and which short-lived.

[14.1] As to diseases — they say that wild trees are not liable to diseases which destroy them, but that they get into poor condition, and that most obviously when they are smitten with hail when either they are about to bud or are just budding or are in bloom; also when either a cold or a hot wind comes at such seasons: but that from seasonable storms, even if they be violent, they take no hurt, but rather that it is good for them all to be exposed to weather: for, unless they are, they do not grow so well. Cultivated kinds however, they say, are subject to various diseases, some of which are, one may say, common to all or to most, while others are special to particular kinds. General diseases are those of being worm-eaten, of being sun-scorched, and rot. All trees, it may be said, have worms, but some less, as fig and apple, some more, as pear. Speaking generally, those least liable to be worm-eaten are those which have a bitter acrid juice, and these are also less liable to sunscorch. Moreover this occurs more commonly in young trees than in those which have come to their strength, and most of all it occurs in the fig and the vine.

[14.2] The olive, in addition to having worms (which destroy the fig too by breeding in it), produces also a ‘knot’ (which some call a fungus, others a barkblister -), and it resembles the effect of sun-scorch. Also sometimes young olives are destroyed by excessive fruitfulness. The fig is also liable to

scab, and to snails which cling to it. However this does not happen to figs everywhere, but it appears that, as with animals, diseases are dependent on local conditions; for in some parts, as about Aineia, the figs do not get scab.

[14.3] The fig is also often a victim to rot and to krados. It is called rot when the roots turn black, it is called krados when the branches do so; for some call the branches kradoi (instead of kladoi), whence the name is transferred to the disease. The wild fig does not suffer from krados rot or scab, nor does it get so worm-eaten in its roots' as the cultivated tree; indeed some wild figs do not even shed their early fruit- not even if they are grafted into a cultivated tree.

[14.4] Scab chiefly occurs when there is not much rain after the rising of the Pleiad; if rain is abundant, the scab is washed off, and at such times it comes to pass that both the spring and the winter figs drop off. Of the worms found in fig-trees some have their origin in the tree, some are produced in it by the creature called the 'horned worm'; but they all turn into the 'horned worm'; — and they make a shrill noise. The fig also becomes diseased if there is heavy rain; for then the parts towards the root and the root itself become, as it were, sodden, and this they call 'bark-shedding.' The vine suffers from over-luxuriance; this, as well as sun-scorch, specially happens to it either when the young shoots are cut by winds, or when it has suffered from bad cultivation, or, thirdly, when it has been pruned upwards.'

[14.5] The vine becomes a 'shedder,' a condition which some call 'casting of the fruit,' if the tree is snowed upon at the time when the blossom falls, or else when it becomes over lusty; what happens is that the unripe grapes drop off, and those that remain on the tree are small. Some trees also contract disease from frost, for instance the vine; for then the eyes of the vine that was pruned early become abortive; and this also happens from excessive heat, for the vine seeks regularity in these conditions too, as in its nourishment. And in general anything is dangerous which is contrary to the normal course of things.

[14.6] Moreover the wounds and blows inflicted by men who dig about the vines render them less able to bear the alternations of heat and cold; for then the tree is weak owing to the wounding and to the strain put upon it, and falls an easy prey — to excess of heat and cold. Indeed, as some think, most diseases may be said to be due to a blow; for that even the diseases known as 'sun-scorch' and 'rot' occur because the roots have suffered in this way. In fact they think that there are only these two diseases; but there is not general

agreement on this. The spring apple and especially the sweet form of it, has the weakest constitution.

[14.7] Some mutilations however do not cause destruction of the whole tree, but only produce barrenness; for instance, if one takes away the top of the Aleppo pine or the date-palm, the tree in both cases appears to become barren, but not to be altogether destroyed.

[14.8] There are also diseases of the fruits themselves, which occur if the winds and rains do not come in due season. For it comes to pass that sometimes trees, figs, for example, shed their fruit when rain does or does not come, and sometimes the fruit is spoilt by being rotted and so choked off, or again ly being unduly dried up. It is worst of all for some trees, as olive and vine, if rain falls on them as they are dropping their blossom; for then the fruit, having no strength, drops also.

[14.9] In Miletus the vines at the time of flowering are eaten by caterpillars, some of which devour the flowers, others, a different kind, the leaves; and they strip the tree; these appear if there is a south wind and sunny weather; if the heat overtakes them, the trees split.

[14.10] About Taras the olives always shew much fruit, but most of it perishes at the time when the blossom falls.³ Such are the drawbacks special to particular regions.

[14.11] There is also another disease incident to the olive, which is called cobweb; for this forms on the tree and destroys the fruit. Certain hot winds also scorch both olive vine-cluster and other fruits. And the fruits of some get worm-eaten, as olive, pear, apple, medlar, pomegranate. Now the worm which infests the olive, if it appears below the skin, destroys the fruit; but if it devours the stone it is beneficial. And it is prevented from appearing under the skin if there is rain after the rising of Arcturus. Worms also occur in the fruit which ripens on the tree, and these are more harmful as affecting the yield of oil. Indeed these worms seem to be altogether rotten; wherefore they appear when there is a south wind and particularly in damp places. The knips also occurs in certain trees, as the oak and fig, and it appears that it forms from the moisture which collects under the bark, which is sweet to the taste. Worms also occur in some pot-herbs, as also do caterpillars, though the origin of these is of course different.

[14.12] Such are in general the diseases, and the plants in which they occur.

Moreover there are certain affections due to season or situation which are likely to destroy the plant, but which one would not call diseases: I mean such affections as freezing and what some call 'scorching.' Also there are winds which blow in particular districts that are likely to destroy or scorch; for instance the 'Olympian' wind of Chalcis in Euboea, when it blows cold a little before or after the winter solstice; for this wind scorches up the trees and makes them more dry and withered than they would become from the sun's heat even in a long period; wherefore its effect is called 'scorching.' In old times it occurred very frequently, and it recurred with great violence in the time of Archippus, after an interval of forty years.

[14.13] The places which suffer most in this way are hollow places, valleys, the ground near rivers, and, in general, places which are least open to wind; the tree which suffers most is the fig, and next to that the olive. The wild olive, being stronger, suffered more than the cultivated tree, which was surprising. But the almonds were altogether unscathed, as also were the apples pears and pomegranates; wherefore this too was a surprising fact. The tree gets scorched by this wind right down to the trunk, and in general the upper are caught more and earlier than the lower parts. The effects are seen partly at the actual produce a good crop of fruit; but, I imagine, they have not been so well observed.

[15.1] Next we must mention what trees perish when certain parts are removed. All perish alike, if the bark is stripped off all round; one may say that every tree, except the andrachne, - perishes under these circumstances; and this tree does so also, if one does violence to the flesh, and so breaks off the new growth which is forming. However one should perhaps except the cork-oak; for this, they say, is all the stronger if its bark is stripped off, that is, the outer bark and also that which lies below it next the flesh — as with the andrachne. For the bark is also stripped from the bird-cherry the vine and the lime (and from this the ropes are made), and, among smaller plants, from the mallow; but in these cases it is not the real nor the first bark which is taken, but that which grows above that, which even of its own accord sometimes falls off because fresh bark is forming underneath.

[15.2] In fact some trees, as andrachne and plane, have a bark which cracks. As some think, in many cases a new bark forms underneath, while the outer bark withers and cracks and in many cases falls off of its own accord; but the

process is not so obvious as it is in the above mentioned cases. Wherefore, as they think, all trees are destroyed by stripping the bark, though the destruction is not in all cases equally rapid or complete. Some in fact, as fig, lime, and oak, survive for some time; indeed some say that these recover, and also the elm and date-palm, and that the bark even of the lime almost entirely closes up again, while in other trees it forms as it were a callus and acquires a peculiar new character. Men try to help the tree by plastering it with mud and tying pieces of bark reeds or something of the kind about it, so that it may not take cold nor become dried up. And they say that the bark has been known to grow again; — for instance that that of the fig-trees at the Trachinian Heraclea did so. However this does not only depend on the quality of the soil and on the climate; the other circumstances which ensue must also be favourable; for, if great cold or heat ensues, the tree perishes at once. The season also makes a difference. For if one strips the bark of a silver-fir or fir at the time when the buds are shooting during Thargelion or Skirrophorion, at which season it is separable, the tree dies at once. If it is done however in winter, the tree holds out longer; and this is especially true of the strongest trees, such as kermes-oak and oak; these it takes longer to kill. However the piece stripped off must be of a certain breadth to cause the death of the tree, especially in the case of the strongest trees; for, if one does it only a little, it is not surprising that the tree should not be killed; though some indeed say that, if it is done at all, the tree certainly dies; this however is probably true only of the weaker kinds. For some, they say, if they are in bad barren soil, die even if the bark is not stripped all round. This then, as has been said, is a universal cause of death.

[16.1] The process which is called topping of trees is fatal only to fir, silver-fir, Aleppo pine, and datepalm, though some add prickly cedar and cypress. These, if they are stripped of their foliage at the top and the crown is cut off, perish wholly and do not shoot again, as is the case with some, if not with all, if they are burnt. But all other trees shoot again after being lopped, and some, such as the olive, become all the fairer. However most trees perish if the stem is split; for no tree seems able to stand this, except vine, fig, pomegranate, and apple; and some perish even if they are wounded severely and deeply. Some however take no harm from this, as the fir when it is cut for tar, and those trees from which the resins are collected, as silver-fir and terebinth; though these trees are in fact then deeply wounded and mangled. Indeed they actually

become fruitful instead of barren, or are made to bear plentifully instead of scantily.

[16.2] Some trees again submit to being hewn both when they are standing and when they have been blown down, so that they rise up again and live and shoot, for instance the willow and the plane. This was known to happen in Antandros and at Philippi; a plane in Antandros having fallen and had its boughs lopped off and the axe applied to its trunk, grew again in the night when thus relieved of the weight, and the bark grew about it again. It happened that it had been hewn two thirds of the way round; it was a large tree, more than ten cubits high, and of such girth that four men could not easily have encircled it. The willow at Philippi which grew again had had its branches lopped off, but the trunk had not been hewn. A certain seer persuaded the people to offer sacrifice and take care of the tree, since what had occurred was a good omen. Also at Stageira an abele in the school gardens which had fallen got up again.

[16.3] Hardly any tree is destroyed by taking out the core; a proof of which is the fact that many large trees are hollow. The people of Arcadia say that the tree under these circumstances lives for a time, but that, if the tree is entirely deprived of its core, fir or silver-fir or any other tree perishes.

[16.4] All trees alike are destroyed when the roots are cut off, whether all or most of them, if those removed are the largest and the most essential to life. Such then are the causes of death which come from the removal of a part of the tree.

[16.5] On the other hand the destruction which oil causes is due rather to a kind of addition than to removal; for oil is hostile to all trees, and so men pour it over what remains of the roots. However oil is more potent with young trees which are just growing; for then they are weaker; wherefore men do not allow them to be touched at that time.

[16.6] Again trees may destroy one another, by robbing them of nourishment and hindering them in other ways. Again an overgrowth of ivy is dangerous, and so is tree-medick, for this destroys almost anything. But halimon is more potent even than this, for it destroys tree-medick.

[16.7] Again some things, though they do not cause death, enfeeble the tree as to the production of flavours and scents; thus cabbage and sweet bay have this effect on the vine. For they say that the vine scents the cabbage and is

infected by it. Wherefore the vine-shoot,- whenever it comes near this plant, turns back and looks away, as though the smell were hostile to it. Indeed Androkydes used this fact as an example to demonstrate the use of cabbage against wine, to expel the fumes of drunkenness; for, said he, even when it is alive, the vine avoids the smell. It is now clear from what has been said how the death of a tree may be caused, how many are the causes of death, and in what several ways they operate.

BOOK V. THE TIMBER OF VARIOUS TREES AND ITS USES.

[1.1] In like manner we must endeavour to speak of timber, saying of what nature is that of each tree, what is the right season for cutting it, which kinds are hard or easy to work, and anything else that belongs to such an enquiry. Now these are the right seasons for cutting timber: — for ‘round’ timber and that whose bark is to be stripped the time is when the tree is coming into leaf. For then the bark is easily stripped (which process they call ‘peeling’) because of the moisture which forms beneath it. At a later time it is hard to strip, and the timber obtained is black and uncomely. However square logs can be cut after the time of peeling, since trimming with the axe removes the uncomeliness. In general any wood is at the best season as to strength when it has not merely ceased coming into leaf, but has even ripened its fruit; however on account of the bark-stripping it comes to pass that ‘round’ timber is in season when it is cut before it is ripe, so that, as it happens, the seasons are here reversed. Moreover the wood of the silver-fir is of a better colour at the time of the first peeling.

[1.2] But since they strip the bark of hardly any trees except silver-fir, fir and pine, these trees are cut in the spring; for then is the time of coming into leaf. Other trees are cut sometimes after wheat-harvest, sometimes after the vintage and the rising of Arcturus, as *aria* (holm-oak), elm, maple, manna-ash, *zygia*, beech, lime, *Valonia* oak, and in general all those whose timber is for underground use. The oak is cut latest of all, in early winter at the end of autumn. If it is cut at the time of peeling, it rots almost more quickly than at any other time, whether it has the bark on or not. This is especially so if it is cut during the first peeling, less so during the second, and least during the third. What is cut after the ripening of the fruit remains untouched by worms, even if it has not peeled: however worms get in under the bark and mark the surface of the stem, and such marked pieces of wood some use as seals. Oak-wood if cut in the right season does not rot and is remarkably free from worms, and its texture is hard and close like horn; for it is like the heart of a tree throughout, except that that of the kind called sea-bark oak is even at that time of poor quality.

[1.3] Again, if the trees are cut at the time of coming into leaf, the result is

the opposite of that which follows when they are cut after fruiting: for in the former case the trunks dry up and the trees do not sprout into leaf, whereas after the time of fruiting they sprout at the sides. At this season however they are harder to cut because the wood is tougher. It is also recommended to do the cutting when the moon has set, since then the wood is harder and less likely to rot. But, since the times when the fruit ripens are different for different trees, it is clear that the right moment for cutting also differs, being later for those trees which fruit later.

[1.4] Wherefore some try to define the time for the cutting of each tree; for instance for fir and silverfir the time is, they say, when they begin to peel: for beech lime maple and zygia in autumn; for oak, as has been said, when autumn is past. Some however say that the fir is ripe for cutting in spring, when it has on it the thing called 'catkin,' and the pine when its 'cluster' is in bloom. Thus they distinguish which trees are ripe for cutting at various times; however it is clear that in all cases the wood is better when the tree is in its prime than when it is quite young or has grown old, the wood of quite young trees being too succulent, and that of old ones too full of mineral matter.

[1.5] Silver-fir and fir are the most useful trees and in the greatest variety of ways, and their timber is the fairest and largest. Yet they differ from one another in many respects; the fir is fleshier and has few fibres, while the silver-fir has many fibres and is not fleshy, so that in respect of each component it is the reverse of the other, having stout fibres but soft flesh of open texture. Wherefore the timber of the one is heavy, of the other light, the one being resinous, the other without resin; wherefore also it is whiter.

[1.6] Moreover the fir has more branches, but those of the silver-fir are much tougher, or rather they are tougher than those of any other tree; — the branches of both however are of close texture, horny, and in colour brown and like resin-glutted wood. When the branches of either tree are cut, sap streams from them for a considerable time, but especially from those of the silver-fir. Moreover the wood of the silver-fir has many layers, like an onion: there is always another beneath that which is visible, and the wood is comprised of such layers throughout.

[1.7] Wherefore, when men are shaving this wood to make oars, they endeavour to take off the several coats one by one evenly: for, if they do this, they get a strong spar, while if they do the work irregularly and do not strip

off the coats evenly, they get a weak one; for the process in this case is hacking instead of stripping. The silver-fir also gives timber of the greatest lengths and of the straightest growth; wherefore yard-arms and masts are made from it. Also the vessels and fibre are more clearly seen in it than in any other tree.

[1.8] At first it grows in height only, until it has reached — the sunshine; and so far there is no branch nor sidegrowth nor density of habit; but after that the tree proceeds to increase in bulk and density of habit, as the outgrowing branches and sidegrowths develop.

[1.9] These are the characteristics peculiar to the silverfir. Others it shares with the fir and the other trees of this class. For instance, sometimes a tree is 'four-cleft' sometimes 'two-cleft'; it is called 'fourcleft' when on either side of the heart-wood there are two distinct and diverse lines of fissure: in that case the blows of the axe follow these lines in cases where the hewing is stopped short on either side of the heart-wood. For the nature of the lines of fissure compels the hewing to take this course. Silver-firs or firs thus formed are said to be 'four-cleft.' And these are also the fairest trees for carpentry, their wood being the closest and possessing the aigis.

[1.10] Those which are 'two-cleft' have one single line of fissure on either side of the heart-wood, and the lines of fissure do not correspond to each other, so that the hewing also is performed by cuts which follow the two lines of fissure, so as to reach the two sides of the heart-wood at different angles. Now such wood, they say, is the softest, but the worst for carpentry, as it warps most easily. Those trees which have only a single continuous line of fissure are said to be 'one-cleft,' though here too the cutting is done from either side of the heart-wood: and such wood has, they say, an open texture, and yet it is not at all apt to warp.

[1.11] There are also differences in the bark, by observation of which they can tell at once what the timber of the tree is like as it stands. For if the timber has straight and not crooked lines of fissure, the bark also is smooth and regular, while if the timber has the opposite character, the bark is rough and twisted; and so too is it with other points. However few trees are 'four-cleft,' and most of those which are not are 'one-cleft.' All wood, as was said before, which grows in a position facing north, is bigger, more erect, of straighter grain, tougher, and in general fairer and more abundant. Moreover of an

individual tree the wood on the northward side is closer and more vigorous. But if a tree stands sideways to the north — with a draught round it, the north wind by degrees twists and contorts it, so that its core becomes twisted instead of running straight.

[1.12] The timber of such a tree while still in one piece is strong, but, when cut, it is weak, because the grain slants across the several pieces. Carpenters call such wood ‘short lengths,’ because they thus cut it up for use. Again in general wood which comes from a moist, sheltered, shady or confined position is inferior both for carpentry and for fuel. Such are the differences, generally speaking, between trees of the same kind as they are affected by situation.

[2.1] Some indeed make a distinction between regions and say that the best of the timber which comes into Hellas for the carpenter’s purposes is the Macedonian, for it is smooth and of straight grain, and it contains resin: second best is that from Pontus, third that from the Rhyndakos, fourth that of the country of the Ainianes, worst is that of Parnassus and that of Euboea, for it is full of knots and rough and quickly rots. As to Arcadian timber the case is doubtful.

[2.2] The strongest wood is that which is without knots and smooth, and it is also the fairest in appearance. Wood becomes knotty when it has been ill nourished and has suffered severely whether from winter or some such cause; for in general a knotty habit is supposed to indicate lack of nourishment. When however, after being ill nourished, the tree recovers and becomes vigorous, the result is that the knots are absorbed by the growth which now covers them; for the tree, being now well fed and growing vigorously, recovers, and often the wood is smooth outside, though when split it is seen to have knots. And this is why they examine the core of wood that has been split; for, if this contains knots, the outward parts will also be knotty, and these knots are harder to deal with than the outer ones, and are easily recognised.

[2.3] ‘Coiling’ of the wood is also due to winter or ill nourishment. Wood is said to ‘coil’ when there is in it closer twisting than usual, made up of an unusual number of rings: this is not quite like a knot, nor is it like the ordinary curling of the wood, which runs right through it and is uniform. ‘Coiling’ is much more troublesome and difficult to deal with than knots; it seems to correspond to the so-called ‘centres’ which occur in marbles. That vigorous

growth covers up the knots is plain from simple observation of the fact and also from other similar instances. For often some part of the tree itself is absorbed by the rest of the tree which has grown into it; and again, if one makes a hole in a tree and puts a stone into it or some other such thing, it becomes buried, being completely enveloped by the wood which grows all round it: this happened with the wild olive in the market-place at Megara; there was an oracle that, if this were cut open, the city would be taken and plundered, which came to pass when Demetrius took it. For, when this tree was split open, there were found greaves and certain other things of Attic workmanship hanging there, the hole in the tree having been made at the place where the things were originally hung on it as offerings. Of this tree a small part still exists, and in many other places further instances have occurred. Moreover, as has been said, such occurrences happen also with various other trees.

[3.1] Corresponding to the individual characters of the several trees we have the following kinds of differences in the wood: — it differs in closeness, heaviness, hardness or their opposites, and in other similar ways; and these differences are common to cultivated and wild trees. So that we may speak of all trees without distinction.

[3.2] Box and ebony seem to have the closest and heaviest wood; for their wood does not even float on water. This applies to the box-tree as a whole, and to the core of the ebony, which contains the black pigment. The nettle-tree also is very close and heavy, and so is the core of the oak, which is called ‘heart of oak,’ and to a still greater degree this is true of the core of laburnum; for this seems to resemble the ebony.

[3.3] The wood of the terebinth is also very black and close-grained; at least in Syria they say that it is blacker than ebony, that in fact they use it for making their dagger handles; and by means of the lathe chisel they also make of it ‘Theriklean’ cups, so that no one could distinguish these from cups made of pottery; for this purpose they use, it is said, the heart-wood, but the wood has to be oiled, for then it becomes comelier and blacker.

[3.4] There is also, they say, another tree which, as well as the black colour, has a sort of reddish variegation, so that it looks like variegated ebony, and of it are made beds and couches and other things of superior quality. This tree is very large and has handsome leaves and is like the pear.

[3.5] These trees then, as well as the black colour, have close wood; so also have maple, zygia and in general all those that are of compact growth; so also have the olive and the wild olive, but their wood is brittle. Of wild trees which are used for roof-timbers the wood of the silver-fir is the least compact, and among others that of the elder, fig, apple, and bay. The hardest woods are those of the oak, zygia, and aria (holm-oak); in fact men wet these to soften them for boring holes. In general, woods which are of open porous texture are soft, and of those of fleshy texture the softest is the lime. The last-named seems also to be the hottest; the proof of which is that it blunts iron tools more than any other; for they lose their edge — by reason of its heat.

[3.6] Ivy and bay are also hot woods, and so in general are those used for making fire-sticks; and Menestor adds the wood of the mulberry. The coldest woods are those which grow in water and are of succulent character. The wood again of willow and vine is tough; wherefore men make their shields of these woods; for they close up again after a blow; but that of the willow is lighter, since it is of less compact texture; wherefore they use this for choice. The wood of the plane is fairly tough, but it is moister in character, as also is that of the elm. A proof of this is that, if it is set upright after being cut, it discharges much water. The wood of the mulberry is at once of close grain and tough.

[3.7] The wood of the elm is the least likely to warp; wherefore they make the 'hinges' of doors out of elm wood; for, if these hold, the doors also keep in place; otherwise they get wrenched out of place, they make the 'hinges' by putting wood from the root above and wood 'from the foliage' below, thus reversing the natural position: (by wood 'from the foliage' joiners mean the upper wood). For, when these are fitted the one into the other, each counteracts the other, as they naturally tend in opposite directions: whei'eas, if the wood were set — as it grows, all the parts would give where the strain came.

[3.8] (They do not finish off the doors at once; but, when they have put them together, stand them up, and then finish them off the next year, or sometimes the next year but one, if they are doing specially good work. For in summer, as the wood dries, the work comes apart, but it closes in winter. The reason is that the open fleshy texture of the wood of the silver-fir drinks in the air, which is full of moisture.)

[3.9] Palm-wood is light easily worked and soft like cork-oak, but is superior to that wood, as it is tough, while the other is brittle. Wherefore men now make their images of palm-wood and have given up the wood of cork-oak. However the fibres do not run throughout the wood, nor do they run to a good length, nor are they all set symmetrically, but run in every direction. The wood dries while it is being planed and sawn.

[3.10] Thyon (thyine wood), which some call thya, grows near the temple of Zeus Ammon and in the district of Cyrene. In appearance the tree is like the cypress alike in its branches, its leaves, its stem, and its fruit; or rather it is like a wild cypress. There is abundance of it where now the city stands, and men can still recall that some of the roofs in ancient times were made of it. For the wood is absolutely proof against decay, and the root is of very compact texture, and they make of it the most valuable articles. Images are carved from these woods, prickly cedar cypress nettle-tree box, and the small ones also from the roots of the olive, which are unbreakable and of a more or less uniformly fleshy character. The above facts illustrate certain special features of position, natural character and use.

[4.1] Difference in weight is clearly to be determined by closeness or openness of texture, dampness or dryness, degree of glutinousness, hardness or softness. Now some woods are both hard and heavy, as box and oak, while those that are brittle and hardest owing to their dryness, are not heavy. All wood of wild trees, as we have said before, is closer harder heavier, and in general stronger than that of the cultivated forms, and there is the same difference between the wood of 'male' and of 'female' trees, and in general between trees which bear no fruit and those which have fruit, and between those which bear inferior fruit and those whose fruit is better; on the other hand occasionally the 'male' tree is the more fruitful, for instance, it is said, the cypress, the cornelian cherry and others. However of vines it is clear that those which bear less fruit have also more frequent knots and are more solid,- and so too with apples and other cultivated trees.

[4.2] Naturally proof against decay are cypress, prickly cedar, ebony nettle-tree, box olive, wild olive resinous fir, aria (holm-oak) oak sweet chestnut. Of these the wood of the cypress seems to last longest; at least the cypress-wood at Ephesus, of which the doors of the modern temple were made, lay stored up for four generations. And this is the only wood which takes a fine polish,

wherefore they make of it valuable articles. Of the others the least liable to decay after the wood of the cypress and thyme-wood is, they say, that of the mulberry, which is also strong and easily worked: when it becomes old, this wood turns black like that of the nettle-tree.

[4.3] Again whether a given wood is not liable to decay may depend on the purpose to which it is put and the conditions to which it is subjected: thus the elm does not decay if exposed to the air, nor the oak if it is buried or soaked in water; for it appears to be entirely proof against decay: wherefore they build vessels of it for use on rivers and on lakes, but in seawater it rots, though other woods last all the better; which is natural, as they become seasoned with the brine.

[4.4] The beech also seems to be proof against decay in water and to be improved by being soaked. The sweet chestnut under like treatment is also proof against decay. They say that the wood of the fir is more liable to be eaten by the teredon than that of the silver-fir; for that the latter is dry, while the fir has a sweet taste, and that this is more so, the more the wood is soaked with resin; they go on to say that all woods are eaten by the teredon except the olive, wild or cultivated, and that these woods escape because of their bitter taste. Now woods which decay in sea-water are eaten by the teredon, those which decay on land by the skolex and thrips; for the teredon does not occur except in the sea. It is a creature small in size, but has a large head and teeth; the thrips resembles the skolex, and these creatures gradually bore through timber. The harm that these do is easy to remedy; for, if the wood is smeared with pitch, it does not let in water when it is dragged down into the sea; but the harm done by the teredon cannot be undone. Of the skolekes which occur in wood some come from the decay of the wood itself, some from other skolekes which engender therein. For these produce their young in timber, as the worm called the 'horned worm' does in trees, having bored and scooped out a sort of mouse-hole by turning round and round. But it avoids wood which has a strong smell or is bitter or hard, such as boxwood, since it is unable to bore through it. They say too that the wood of the silver-fir, if barked just before the time of budding, remains in water without decaying, and that this was clearly seen at Pheneos in Arcadia, when their plain was turned into a lake since the outlet was blocked up. For at that time they made their bridges of this wood, and, as the water rose, they placed more and more

atop of them, and, when the water burst its way through and disappeared, all the wood was found to be undecayed. This fact then became known by means of an accident. In the island of Tylos off the Arabian coast they say that there is a kind of wood of which they build their ships, and that in sea-water this is almost proof against decay; for it lasts more than 200 years if it is kept under water, while, if it is kept out of water, it decays sooner, though not for some time. They also tell of another strange thing, though it has nothing to do with the question of decay: they say that there is a certain tree, of which they cut their staves, and that these are very handsome, having a variegated appearance like the tiger's skin; and that this wood is exceedingly heavy, yet when one throws it down on hard ground it breaks in pieces like pottery.

[4.5] Moreover, the wood of the tamarisk is not weak there, as it is in our country, but is as strong as kermes-oak or any other strong wood. Now this illustrates also the difference in properties caused by country and climate. Moreover when wood, such as that of oak or fir, is soaked in brine — not all being soaked at the same depth in the sea, but some of it close to shore, some rather further out, and some at a still greater depth — in all cases the parts of the tree nearest the root (whichever tree it is) sink quicker under water, and even if they float, have a greater tendency to sink.

[5.1] Some wood is easy to work, some difficult. Those woods which are soft are easy, and especially that of the lime; those are difficult which are hard and have many knots and a compact and twisted grain. The most difficult woods are those of aria (holm-oak) and oak, and the knotty parts of the fir and silver-fir. The softer part of any given tree is always better than the harder, since it is fleshier: and carpenters can thus at once mark the parts suitable for planks. Inferior iron tools can cut hard wood better than soft: for on soft wood tools lose their edge, as was said in speaking of the lime, while hard woods actually sharpen it: wherefore cobblers make their strops of wild pear.

[5.2] Carpenters say that all woods have a core, but that it is most plainly seen in the silver-fir, in which one can detect a sort of bark-like character in the rings. In olive box and such woods this is not so obvious; wherefore they say that box and olive lack this tendency; for that these woods are less apt to 'draw' than any others. 'Drawing' is the closing in of the wood as the core is disturbed. For since the core remains alive, it appears, for a long time, it is always removed from any article whatever made of this wood, but especially

from doors,' so that they may not warp: and that is why the wood is split.

[5.3] It might seem strange that in 'round' timber the core does no harm and so is left undisturbed, while in wood whose texture has been interfered with, unless it is taken out altogether, it causes disturbance and warping: it were rather to be expected that it would die when exposed. Yet it is a fact that masts and yard-arms are useless, if it has been removed from the wood of which they are made. This is however an accidental exception, because the wood in question has several coats,- of which the strongest and also thinnest is the outermost, since this is the driest, while the other coats are strong and thin in proportion to their nearness to the outermost. If therefore the wood be split, the driest parts are necessarily stripped off. Whether however in the other case the object of removing the core is to secure dryness is matter for enquiry. However, when the core 'draws' it twists the wood, whether it has been split or sawn, if the sawing is improperly performed: the saw-cut should be made straight and not slantwise. Thus, if the core be represented by the line A, the cut must be made along the line BD, and not along the line BC: for in that case, they say, the core will be destroyed, while, if cut in the other way, it will live. For this reason men think that every wood has a core: for it is clear that those which do not seem to possess one nevertheless have it, as box nettle-tree kermes-oak: a proof of this is the fact that men make of these woods the pivots of expensive doors, and accordingly the headcraftsmen specify that wood with a core shall not be used. This is also a proof that any core 'draws,' even those of the hardest woods, which some call the heart. In almost every wood, even in that of the silver-fir, the core is the hardest part, and the part which has the least fibrous texture: — it is least fibrous because the fibres are far apart and there is a good deal of fleshy matter between them, while it is the hardest part because the fibres and the fleshy substance are the hardest parts. Wherefore the headcraftsmen specify that the core and the parts next it are to be removed, that they may secure the closest and softest part of the wood.

[5.4] Timber is either 'cleft,' 'hewn, or 'round': it is called 'cleft,' when in making division they saw it down the middle, 'hewn' when they hew off the outer parts, while 'round' clearly signifies wood which has not been touched at all. Of these, 'cleft' wood is not at all liable to split, because the core when exposed dries and dies: but 'hewn' and 'round' wood are apt to split, and especially 'round' wood, because the core is included in it: no kind of timber

indeed is altogether incapable of splitting. The wood of the nettle-tree and other kinds which are used for making pivots for doors are smeared with cow-dung to prevent their splitting: the object being that the moisture due to the core may be gradually dried up and evaporated. Such are the natural properties of the core.

[6.1] For bearing weight silver-fir and fir are strong woods, when set slantwise: for they do not give like oak and other woods that contain mineral matter but make good resistance. A proof of this is that they never split like olive and oak, but decay first or fail in some other way. Palm-wood is also strong, for it bends the opposite way to other woods: they bend downwards, palm-wood upwards. It is said that fir and silver-fir also have an upward thrust. As to the sweet chestnut, which grows tall and is used for roofing, it is said that when it is about to split, it makes a noise, so that men are forewarned: this occurred once at Antandros at the baths, and all those present rushed out. Fig-wood is also strong, but only when set upright.

[6.2] The wood of the silver-fir may be called the strongest of all. But for the carpenter's purposes fir best takes glue because of its open texture and the straightness of its pores; for they say that it never by any chance comes apart when it is glued. Alaternus is the easiest wood for turning, and its whiteness is like that of the holly. Of the rest lime is the easiest, the whole tree, as was said, being easy to work because of the softness of the wood. In general those woods which are tough are easy to bend. The mulberry and the wild fig seem to be specially so; wherefore they make of these theatre-seats, the hoops of garlands, and, in general, things for ornament.

[6.3] Woods which have a fair amount of moisture in them are easier to saw or split than those which are altogether dry: for the latter give, while the former resist. Wood which is too green closes up again when sawn, and the sawdust catches in the saw's teeth and clogs them; wherefore the teeth of the saw are set alternate ways, to get rid of the sawdust. Wood which is too green is also harder to bore holes in; for the auger's dust is only brought up slowly, because it is heavy; while, if the wood is dry, the air gets warmed by the boring and brings it up readily and at once. On the other hand, wood which is over dry is hard to saw because of its hardness: for it is like sawing through earthenware; wherefore they wet the auger when using it.

[6.4] However green wood is easier to work with the axe the chisel or the

plane; for the chisel gets a better hold and does not slip oft. Again softer woods are easier for the axe and for smoothing, and also a better polished surface is obtained. The cornelian cherry is also a very strong wood, and among the rest elm-wood is the strongest; wherefore, as was said, they make the 'hinges' for doors of elm-wood. Manna-ash and beech have very moist wood, for of these they make elastic bedsteads.

[7.1] Next we must endeavour to say in a general way, distinguishing the several uses, for which purposes each kind of timber is serviceable, which is of use for ship-building, which for house-building: for these uses extend far and are important. Now silver-fir, fir and Syrian cedar are, generally speaking, useful for ship-building; for triremes and long ships are made of silver-fir, because of its lightness, and merchant ships of fir, because it does not decay; while some make triremes of it also because they are ill provided with silver-fir. The people of Syria and Phoenicia use Syrian cedar, since they cannot obtain much fir either; while the people of Cyprus use Aleppo pine, since their island provides this and it seems to be superior to their fir.

[7.2] Most parts are made of these woods; but the keel for a trireme is made of oak, that it may stand the hauling; and for merchantmen it is made of fir. However they put an oaken keel under this when they are hauling, or for smaller vessels a keel of beech; and the sheathing is made entirely of this wood. (However oak-wood does not join well with glue on to fir or silver-fir; for the one is of close, the other of open grain, the one is uniform, the other not so; whereas things which are to be made into one piece should be of similar character, and not of opposite character, like wood and stone.)

[7.3] The work of bentwood for vessels is made of mulberry manna-ash elm or plane; for it must be tough and strong. That made of plane-wood is the worst, since it soon decays. For triremes some make such parts of Aleppo pine because of its lightness. The cutwater, to which the sheathing is attached, and the catheads are made of manna-ash mulberry and elm; for these parts must be strong. Such then is the timber used in ship-building.

[7.4] For house-building a much greater variety is used, silver-fir, fir and prickly cedar; also cypress oak and Phoenician cedar. In fact, to speak generally, any wood is here of service, unless it is altogether weak: for there are various purposes for which different woods are serviceable, just as there are in ship-building. While other woods are serviceable for special articles

belonging to various crafts, such as furniture tools and the like, the wood of silver-fir is of use for almost more purposes than any other wood; for it is even used for painters' tablets. For carpentry the oldest wood is the best, provided that it has not decayed; for it is convenient for almost anyone to use. But for ship-building, where bending is necessary, one must use wood which contains more moisture (though, where glue is to be used, drier wood is convenient). For timber-work for ships is set to stand when it is newly made: then, when it has become firmly united, it is dragged down to the water, and then it closes up and becomes watertight,- unless all the moisture has been dried out of it, in which case it will not take the glue, or will not take it so well.

[7.5] But we must consider for what purposes each several wood is serviceable. Silver-fir and fir, as has been said, are suitable both for ship-building house-building and also for other kinds of work, but silver fir is of use for more purposes than fir. Aleppo pine is used for both kinds of building, but especially for ship-building, yet it soon rots. Oak is used for house-building, for ship-building, and also for underground work; lime for the deck-planks of long ships, for boxes, and for the manufacture of measures; its bark is also useful for ropes and writing-cases, for these are sometimes made of it.

[7.6] Maple and zygia are used for making beds and the yokes of beasts of burden: yew for the ornamental work attached — to chests and footstools and the like: kermes-oak for the axles of wheelbarrows and the cross-bars of lyres and psalteries: beech for making waggons and cheap carts: elm for making doors and weasel-traps, and to some extent it is also used for waggon work; pedos for waggon-axles and the stocks of ploughs: andrachne is used for women for parts of the loom: Phoenician cedar for carpenters' work and for work which is either to be exposed to the air or buried underground, because it does not decay. Similarly the sweet chestnut is used, and it is even less likely to decay if it is used for underground work. Box is used for some purposes; however that which grows on Mount Olympus ' is useless, because only short pieces can be obtained and the wood is full of knots. Terebinth is not used, except the fruit and the resin. Alaternus is only useful for feeding sheep; for it is always leafy. Hybrid arbutus is used for making stakes and for burning: holly and Judas-tree for walking-sticks: some also use bay for these; for of this they make light sticks and sticks for old men. Willow is used for shields

hampers baskets and the like. We might in like manner add the several uses of the other woods.

[7.7] Distinction is also made between woods according as they are serviceable for one or other of the carpenter's tools: thus hammers and gimlets are best made of wild olive, but box elm and manna-ash are also used, while large mallets are made of Aleppo pine. In like manner there is a regular practice about each of the other tools. Such are the differences as to the uses of various woods.

[8.1] Each kind of timber, as was said before, differs according to the place where it grows; in one place nettle-tree, in another the cedar is remarkably fine, for instance in Syria; for in Syria and on its mountains the cedars grow to a surpassing height

[8.2] For it is told how the Romans once made an expedition to that island with twenty-five ships, wishing to found a city there; and so great was the size of the trees that, as they sailed into certain bays and creeks, they got into difficulties through breaking their masts. And in general it is said that the whole island is thickly wooded and, as it were, one wild forest; wherefore the Romans gave up the idea of founding their city: however some of them made an excursion into the island and cleared away a large quantity of trees from a small area, enough to make a raft with fifty sails; but this broke up in the open sea. Corsica then, whether because of its uncultivated condition or because of its soil and climate, is very superior in trees to other countries.

[8.3] The country of the Latins is all well watered; the lowland part contains bay, myrtle, and wonderful beech: they cut timbers of it of such a size that they run the whole length of the keel of a Tyrrhenian vessel. The hill country produces fir and silver-fir. The district called by Circe's name is, it is said, a lofty promontory, but very thickly wooded, producing oak, bay in abundance, and myrtle. There, according to the natives, dwelt Circe, and they shew Elpenor's tomb, on which grow myrtles like those used for garlands, though other kinds of myrtle are large trees. Further it is said that the district is a recent addition to the land, and that once this piece of land was an island, but now the sea has been silted up by certain streams and it has become united to the coast, and the size of the 'island' is about eighty furlongs in circumference. There is then much difference in trees, as has been said repeatedly, which is due to the individual character of particular districts.

[9.1] Next we must state in like manner and endeavour to determine the properties of each kind of timber in relation to making fire. The best charcoal is made from the closest wood, such as aria (holm-oak) oak, arbutus; for these are the most solid, so that they last longest and are the strongest; wherefore these are used in silver-mines for the first smelting of the ore. Worst of the woods mentioned is oak, since it contains most mineral matter, and the wood of older trees is inferior to that of the younger, and for the same reason that of really old trees is specially bad. For it is very dry, wherefore it sputters as it burns; whereas wood for charcoal should contain sap.

[9.2] The best charcoal comes from trees in their prime, and especially from trees which have been topped: for these contain in the right proportion the qualities of closeness admixture of mineral matter and moisture. Again better charcoal comes from trees- in a sunny dry position with a north aspect than from those grown in a shady damp position facing south. Or, if the wood used contains a good deal of moisture, it should be of close texture; for such wood contains more sap. And, for the same reason, that which is of closer texture either from its own natural character or because it was grown in a drier spot, is, whatever the kind of tree, better. But different kinds of charcoal are used for different purposes: for some uses men require it to be soft; thus in iron-mines they use that which is made of sweet chestnut when the iron has been already smelted, and in silver-mines they use charcoal of pine-wood: and these kinds are also used by the crafts. Smiths require charcoal of fir rather than of oak: it is indeed not so strong, but it blows up better into a flame, as it is less apt to smoulder: and the flame from these woods is fiercer. In general the flame is fiercer not only from these but from any wood which is of open texture and light, or which is dry': while that from wood which is of close texture or green is more sluggish and dull. The fiercest flame of all is given by brushwood; but charcoal cannot be made from it at all, since it has not the necessary substance.

[9.3] They cut and require for the charcoal-heap straight smooth billets: for they must be laid as close as possible for the smouldering process. When they have covered the kiln, they kindle the heap by degrees, stirring it with poles. Such is the wood required for the charcoal-heap.

[9.4] In general damp wood makes an evil smoke, and for this reason green wood does so: I mean the damp woods which grow in marshy ground, such as

plane willow abele black poplar: for even vine-wood, when it is damp, gives an evil smoke. So does palm-wood of its own nature, and some have supposed it to give the most evil smoke of all: whence Chaeremon speaks of 'Veins issuing underground from roots of palm with its malodorous smoke. Most pungent is the smoke of fig-wood, whether wild or cultivated, and of any tree which has a curdling juice; the reason lies in the sap; when such wood has been barked and soaked in running water and then dried, it gives as little smoke as any other, and sends up a very soft flame, since its natural moisture also has been removed. The cinders and ashes of such wood are also pungent, and especially, they say, those of almond-wood.

[9.5] For the crafts requiring a furnace and for other crafts various woods are serviceable according to circumstances. For kindling fig and olive are best: fig, because it is tough and of open texture, so that it easily catches fire and does not let it through, olive, because it is of close texture and oily.

[9.6] Fire-sticks are made from many kinds of wood, but best, according to Menestor, from ivy: for that flares up most quickly and freely. They say also that a very good fire-stick is made of the wood which some call traveller's joy; this is a tree like the vine or the 'wild vine' which, like these, climbs up trees. The stationary piece should be made of one of these, the drill of bay; for the active and passive parts of the apparatus should not be of the same wood, but different in their natural properties to start with, one being of active, the other of passive character. Nevertheless they are sometimes made of the same wood, and some suppose that it makes no difference. They are made in fact of buckthorn kemiesoak, lime and almost any wood except olive; which seems surprising, as olive-wood is rather hard and oily; however it is plainly its moisture which makes it less suitable for kindling. The wood of the buckthorn is also good, and it makes a satisfactory stationary piece; for, besides being dry and free from sap it is necessary that this should also be of rather open texture, that the friction may be effectual; while the drill should be one which gets little worn by use. And that is why one made of bay is best; for, as it is not worn by use, it is effective through its biting quality. All fire-sticks take fire quicker and better in a north than in a south wind, and better in an exposed spot than in one which is shut in.

[9.7] Some woods, such as prickly cedar, exude moisture, and, generally speaking, so do those whose sap is of an oily character; and this is why statues

are sometimes said to 'sweat'; for they are made of such woods. That which seers call the menses of Eileithuia, and for the appearance of which they make atonement, forms on the wood of the silver-fir when some moisture gathers on it: the formation is round in shape, and in size about as large as a pear, or a little larger or smaller. Olive-wood is more apt than other woods to produce shoots even when lying idle or made into manufactured articles; this it often does, if it obtains moisture and lies in a damp place; thus the socket of a door-hinge has been known to shoot, and also an oar which was standing in damp earth in an earthenware vessel.

BOOK VI OF UNDER-SHRUBS.

[1.1] Of the classification of under-shrubs: the wild kinds: the chief distinction that between spinous and spineless.

[1.1] WE have spoken already of trees and shrubs, and next we must speak of under-shrubs and herbaceous plants and of any other natural classes which are included with these; for instance, cereals come under herbaceous plants.

[1.3] But first let us tell of under-shrubs, for this class comes near those mentioned above because of its woody character. Now it may be said that with all plants the wild kinds are more abundant than the cultivated, and this is certainly true of the undershrubs. For the cultivated kinds of this class J are not numerous, and consist almost entirely of coronary plants, as rose gilliflower carnation sweet marjoram martagon lily, to which may be added tufted thyme bergamot-mint calamint southernwood. For all these are woody and have small leaves; wherefore they are classed as under-shrubs. This class covers also pot-herbs, such as cabbage rue and others like them. Of these it is perhaps more appropriate to speak under their proper designation, that is, when we come to make mention of coronary plants and pot-herbs. Now let us first speak of the wild kinds. Of these are several classes and subdivisions, which we must distinguish by the characteristics of each sub-division as well as by those of each class taken as a whole.

[1.4] The most important difference distinguishing class from class which one could find is that between the spineless and the spinous kinds. Again under each of these two heads there are many differences distinguishing kinds and forms, of which we must endeavour to speak severally.

[1.5] Of spinous kinds some just consist of spines, as asparagus and skorpios; for these have no leaves except their spines. Then there are the spinousleaved plants, as thistle eryngo safflower; these and the like have their spines on the leaves, whence their name. Others again have leaves as well as their spines, as rest-harrow caltrop and pheos? which some call stoibe. Caltrop is also spinous-fruited, having spines on the fruit-vessel. Wherefore this peculiarity marks it off from almost all other plants; though many trees and shrubs have spines on the shoots, as wild pear pomegranate Christ's thorn bramble rose caper. Such are the general distinctions which may be made among spinous plants.

[1.6] With spineless plants it is not possible to make such 'generic' distinctions; for the variation of the leaves in size and shape is endless, and the differences are not clearly marked; but we must try to distinguish on another principle. There are many classes of such plants and they differ widely, as rock-rose, bryony, madder, privet, kneoron, marjoram, savory sphakos (sage), elelisphakos (salvia), horehound, konyza, balm, and others like these; and in addition to these we have the plants with a ferula-like stem or with a stem composed of fibre, as fennel, horse-fennel, narthekia (ferula), narthex (ferula) and the plant called by some wolf's bane, and others like these. All these, as well as any other ferula-like plants, may be placed in the class of undershrubs.

[2.1] The various forms and the differences between the above mentioned plants are in some cases more, in some less easy to distinguish. Of rock-rose they distinguish two kinds, 'male' and 'female' in that the one is larger, tougher, more glossy, and has a crimson flower; both however are like the wild rose, save that the flower is smaller and scentless.

[2.2] There are also two kinds of kneoron, one white, the other black. The white has a leathery oblong leaf, somewhat like that of the olive; the leaf of the black is like that of the tamarisk and fleshy; the white grows more on the ground and is scented, while the black is scentless. In both the root, which runs deep, is large (and the branches which divide at the ground level are numerous thick and woody), and the root is also very woody. It is also very tough, wherefore it is used for binding and to put round things, like the withy. It grows and flowers after the autumnal equinox, and remains in flower a long time.

[2.3] Of marjoram the black form is barren, the white bears fruit. There is a black and a white thyme, and it flowers very freely: it is in bloom about the summer solstice. It is from this flower that the bee gets the honey, and by it beekeepers say that it is made known whether they have a good yield of honey or not; for, if the thyme flowers abundantly, they have a good yield, but the bloom is injured or even destroyed if it is rained upon.

[2.4] Savory, and still more marjoram, has a conspicuous fruitful seed, but in thyme it is riot easy to find, being somehow mixed up with the flower; for men sow the flower and plants come up from it. This plant is sought and obtained by those in Athens who wish to export such herbs. But it has a

peculiarity as compared both with similar plants and with most others, namely the kind of region which it affects; they say that it can not be grown or become established where a breeze from the sea does not reach. This is why it does not grow in Arcadia, while savory marjoram and such plants are common in many parts. (A similar peculiarity is found in the olive; for it appears that it likewise will not grow more than three hundred furlongs from the sea.)

[2.5] The difference between sphakos (sage) and elelisphakos (salvia) is like that between cultivated and wild; for the leaf of sphakos is smoother smaller and less succulent, while that of elelisphakos is rougher.

[2.6] There are also two kinds of horehound: one has a narrow leaf with a more jagged edge, and the notches are very conspicuous and deep, and this is the plant used by druggists for certain purposes; the other has a rounder leaf, which, like that of sphakos, is not at all succulent; the notches are less conspicuous and the edge less jagged.

[2.7] Of konyza there is a 'male' and a 'female' kind, the differences between them being such as are usual between forms so distinguished; the 'female' has slenderer leaves, is more compact, and a smaller plant; the 'male' is larger, has thicker stalks, is more branched, has larger glossier leaves, and moreover the flower is more conspicuous. Both bear fruit; the plant as a whole is late in growing and in blooming; it blooms about the rising of Arcturus and is full grown after his setting. The smell of the 'male' plant is strong, but that of the 'female' more pungent; wherefore both of them are of use against wild beasts.

[2.8] These plants then and others like them have, as it were, different forms. Again there are some which have but one form both among those already mentioned and others as well;; for there are numerous plants of this class.

[2.9] The class of ferula-like plants (for this too belongs to the under-shrubs) comprises many kinds: here we must first speak of the characteristic which is common to all, including ferula itself (narthex) and narthekia, whether they both belong to the same kind and differ only in size, or whether, as some say, they are distinct. The obvious character of both is alike, except as to size; for narthex grows very tall, while narthekia is a small plant. Each of them has a single stalk, which is jointed; from this spring the leaves and some small stalks; the leaves come alternately by which I mean that they do not spring

from the same part of the joint, but in alternating rows. For a considerable distance they embrace the stalk, like the leaves of the reed, but they turn back from it more owing to their softness and their size; for the leaf is large soft and much divided, so that it is almost hair-like; the largest leaves are the lowest ones next the ground, and so on in proportion. The flower is quince-yellow and inconspicuous, the fruit like dill, but larger. The plant divides at the top and has some small branches, on which grow the flower and the fruit. It also bears flowers and fruit on the side-stalks all the way up, like dill. The stalk only lasts a year, and the growth takes place in spring, the leaves growing first and then the stem, as with other plants. It roots deep and has but a single root. Such is the ferula.

[2.10] Of the others some to a certain extent resemble ferula, that is, in having a hollow stem; for instance deadly nightshade, hemlock, hellebore, asphodel: while some have a stem more or less, as it were, consisting of fibre, as fennel, aconite, and others like these. The fruit of deadly nightshade is peculiar in being black and like a grape and like wine in taste.

[2.11] Of certain specially important spineless under-shrubs silphium and magydaris belonging to ferula-like plants.

[3.1] Most important and peculiar in their characters are the silphium and papyrus of Egypt. These too come under the class of ferula-like plants; of these we have spoken of the papyrus already under the head of plants living in water; of the other we have now to speak.

[3.2] The silphium has a great deal of thick root; its stalk is like ferula in size, and is nearly as thick; the leaf, which they call inaspeton, is like celery: it has a broad fruit, which is leaf-like, as it were, and is called the phyllon. The stalk lasts only a year, like that of ferula. Now in spring it sends up this maspelon, which purges sheep and greatly fattens them, and makes their flesh wonderfully delicious; after that it sends up a stalk, which is eaten, it is said, in all ways, boiled and roast, and this too, they say, purges the body in forty days. It has two kinds of juice, one from the stalk and one from the root; wherefore the one is called 'stalk-juice,' the other 'root-juice.' The root has a black bark, which is stripped off. They have regulations, like those in use in mines, for cutting the root, in accordance with which they fix carefully the proper amount to be cut, having regard to previous cuttings and the supply of the plant. For it is not allowed to cut it wrong nor to cut more than the

appointed amount; for, if the juice is kept and not used, it goes bad and decays. When they are conveying it to Peiraeus, they deal with it thus: having put it in vessels and mixed meal with it, they shake it for a considerable time, and from this process it gets its colour, and this treatment makes it thenceforward keep without decaying. Such are the facts in regard to the cutting and treatment. The plant is found over a wide tract of Libya, for a distance, they say, of more than four thousand furlongs, but it is most abundant near the Syrtis, starting from the Euesperides islands. It is a peculiarity of it that it avoids cultivated ground, and, as the land is brought under cultivation and tamed, it retires, plainly shewing that it needs no tendance but is a wild thing. The people of Cyrene say that the silphium appeared seven years before they founded their city; now they had lived there for about three hundred years before the archonship at Athens of Simonides.

[3.3] Such is their account. Others however say that the root of the silphium grows to the length of a cubit or a little longer, and in the middle of this is a head, which is the highest part and almost comes above ground, and is called the 'milk', from this then presently grows the stalk, and from that the magydaris which is also called the phyllon; but it is really the seed, and, when a strong south wind blows after the setting of the dog-star, it is scattered abroad and the silphium grows from it. The root and the stalk grow in the same year; nor is this a singular feature unless they mean that it grows immediately after the dispersal of the seed since the same thing occurs with other plants also.

[3.4] There is this singular statement, which is inconsistent with what was said above, that, it is said, it is necessary to dig the ground every year, and that, if it be left alone, it bears the seed and the stalk, but these are inferior and so is the root; on the other hand, that with digging they are improved because the soil is changed. (This is inconsistent with the statement that silphium avoids cultivated land.) They add that the roots are cut up into vinegar and eaten fresh, and that the leaf is of a golden colour. We have also the inconsistent statement that sheep are not purged by eating the leaves; for they say that in spring and in winter they are driven into the hill-country, where they feed on this and on another plant which is like southernwood; both these plants appear to be heating and not to cause purging, but, on the contrary, to have a drying effect and promote digestion. It is also said that, if a sheep

which is sick or in bad condition comes to that district, it is quickly cured or else dies, but usually it recovers. Which of these accounts is true is matter for enquiry.

[3.5] The plant called magydaris is distinct from silphium, being of later growth and less pungent, and it does not produce the characteristic juice; experts can also easily distinguish it by its appearance. It grows in Syria and not in Cyrene, and they say that it is also abundant on Mount Parnassus, and some call it silphium. Whether however, like silphium, it avoids cultivated ground is matter for enquiry, as also whether it has any resemblance or likeness in leaf and stalk, and, in general, whether it produces a juice. In these examples we may consider the class of ferula-like plants [and, in general, that of spinous plants.]

[4.1] Taking next the class of spinous plants (for we must next speak of them), we have already distinguished those which are altogether spinous and those which have spinous leaves, and now we must speak of each of these classes separately, and also, in the third place, of those which have leaves as well as their spines, such as pheos and caltrop. Moreover caper has the peculiarity of possessing not only spines on its stems but also a spinous leaf. Of the classes thus distinguished that with spinous leaves is the largest, while that which is altogether spinous is about the smallest. It is indeed, as was said, a very small class, and it would not be easy to find examples of such plants besides asparagus and skorpios. Both of these flower after the autumnal equinox. Skorpios produces its flower in the fleshy swelling below the top of the spinous twig; at first it is white, but afterwards it becomes purplish. Asparagus produces alongside of the spines a small knob, and from this grows the flower, which is of small size. Skorpios has a single root which runs deep; asparagus roots very deep and its roots are numerous and matted, the upper part of them being in one piece, and from this the actual shoots spring. The stalk comes up from the plant in spring and is edible; afterwards, as the season advances, it acquires its rough and spinous character; the bloom appears not only on this stalk, but on those of previous years, for the stalk is not annual. Such is the character of plants which are altogether spinous.

[4.2] Of those which have spinous leaves the largest class, one may say, consists of those plants which are thistle-like, by which I mean that the swollen part, that part which contains the flower, or, it may be, the fruit, is in

all cases a thistle-head, or has that appearance. However there are differences in the 'head' itself, in size shape colour number of spines and in other respects. For, apart from quite a few plants, such as soap-wort sow-thistle and possibly some others, nearly all the rest have this character (even sow-thistle has a spinous character, but its seed-process is different). The list includes all the following: akorna, milk-thistle, khalkeios, safflower, polyakanthos, distaff-thistle, onopyxos, ixine, chamaeleon (the last-named, however, has not spinous leaves, though golden thistle, which is also called 'meadow-thistle,' has), and so on, for there are many more. These differ from one another not only in the aforesaid ways, but in that some of them have many stalks and side-growths, like the pinethistle, while some have a single stalk and no sidegrowths, like the safflower, and some again have out-growths above from the top of the plant, like the globe-thistle. Again some grow directly the first rains come, others at a later time, some again in summer, as the plant which some call yellow starthistle, and ixine. So too the flowering-time differs: golden thistle blooms late and is in bloom for a long time.

[4.3] Pine-thistle has but one kind, but there are different kinds of safflower, the wild and the cultivated. Again of the wild kind there are two forms, one very like the cultivated except that the stalk is straighter; wherefore in ancient times women sometimes used it to make distaffs. It has a fruit which is black large and bitter. The other is leafy, and its stalks are like those of the sow-thistle, so that to some extent it comes to have a prostrate stem; for on account of the softness of the stalks it bends down towards the ground; and it has a small fruit, which is bearded. All the forms produce abundant seed, but it is larger and more crowded in the wild forms. This kind has also a peculiarity as compared with other wild plants; these are usually coarser and more spinous than the cultivated forms, but in this plant the wild form is softer and smoother.

[4.4] The akorna resembles in a general way in appearance the cultivated safflower, but has a yellowish colour and a sticky juice. There is also a plant called distaff-thistle, which is whiter than these. A peculiarity of the leaf of this is that, if it is stripped off and applied to the flesh, the contact makes the juice blood-coloured, wherefore some call this kind of spinous plant 'blood-wort'; also it has an abominable smell, like that of blood; it matures its fruit late, towards autumn. Indeed, generally speaking, all plants like the thistle-

tribe are late fruiting. All these plants grow both from seed and from the root, so that there is but a short period between the beginning of growth and the maturing of the seed.

[4.5] Golden thistle has not only this peculiarity, that it has a root which is edible, whether boiled or raw, but the root is best when the plant is in flower, and, as it becomes hard, it produces a juice. The flowering time is also peculiar, about the solstice.

[4.6] The root of the sow-thistle is also fleshy and edible; but the swollen part is elongated and not thistle-like; and, alone of the spinous-leaved plants, it has this peculiarity, in which it is the reverse of the chamaeleon, (for that plant, though it has not spinous leaves, has a thistle-like flower-head). The flower of the sow-thistle, as it ages, turns into down, as do that of the dandelion the tamarisk and other plants like these. In its growth there is a succession up to the summer, part forming flowers, part flowering, and part producing seed; this has little moisture in it and has a sharp point. The leaf, as it dries, becomes flaccid and no longer pricks.

[4.7] *Ixine* does not grow in many places, and it has leaves on the root. From the middle of the root grows the seed-bearing thistle-head, which is like an apple and well hidden by the leaves; this on its head produces its gum, which is pleasant to the taste, and this is the 'thorn-mastich.' These plants and others like them are found almost everywhere.

[4.8] But the plant called *kaktos* (cardoon) grows only in Sicily, and not in Hellas. It is a plant quite different from any other; for it sends up straight from the root stems which creep on the ground, and its leaf is broad and spinous: these stems are called *kaktoi*; they are edible, if peeled, and are slightly bitter, and men preserve them in brine.

[4.9] There is another kind which sends up an erect stem, called the *pternix*. This too is edible, but cannot be preserved. The fruit-vessel, which contains the seed, is in shape like a thistle-head: and when the downy seeds are taken off, this too is edible and resembles the 'brain' of the palm; and it is called *skalias*. Such are the different characteristics in the light of which we may observe the spinousleaved plants.

[5.1] Examples of plants which have leaves as well as spines are *pheos* rest-harrow star-thistle caltrop 'horse-pheos' (spurge) butcher's broom . . . , and it has a fleshy leaf: it is much divided and has many roots, but is not deep-

rooting. It grows at the rising of the Pleiad, the first seed-time, and then puts forth its leaf; for it is not annual, but lives longer than one year.

[5.2] Caper, as was said, is quite distinct from these; it has a spinous leaf and a spinous stem, whereas pheos and 'horse-pheos' have no spines on their leaves; it has a single root, is low-growing, and has a creeping stem; it grows and flowers in summer, and the leaf remains green till the rising of the Pleiad. It rejoices in sandy light soils, and it is said that it is unwilling to grow on cultivated land, and that though it grows near towns and in good soil, and not, like silphium, in mountain country. This account however is not altogether accurate.

[5.3] A peculiarity of caltrop is that it is spinousfruited. There are two kinds; one has a leaf like that of chick-pea, the other has spinous leaves. Both are low-growing and much divided, but the spinous-leaved form grows later and is found near enclosures. The seed of the early kind is like that of sesame, that of the late kind is round and blackish and enclosed in a pod. These may serve as examples of plants which have spines as well as leaves.

[5.4] Rest-harrow has spines on the shoots; the leaf, which is annual, is like that of rue, and grows right along the stem, so that the general appearance is that of a garland, the leaves being set at intervals alternately along it; the flower is irregular, and the fruit contained in a pod, which is not divided into compartments. It grows in sticky rich soil and especially in sown and cultivated land; wherefore it is an enemy to husbandmen, and it is hard to kill; for, when it gets hold of a piece of ground, it immediately pushes its roots down deep, and every year it sends up new growths at the sides and the next year it roots these again. Wherefore it has to be dragged up entire; this is done when the ground has been moistened, and then it is easier to destroy. But, if but a small piece is left, it shoots again from this. It begins to grow in summer and completes its growth in autumn. Let these examples serve for a survey of the wild forms of under-shrubs.

[6.1] The cultivated kinds need but a brief survey; these come under the class of coronary plants. Of coronary plants we must endeavour to give a general account, so that the whole class may be included. This group has a somewhat peculiar position, since it overlaps partly the under-shrubs, partly the herbaceous plants; wherefore the latter must also be included and we must mention them as occasion serves, taking first the under-shrubs.

[6.2] These may be divided into two groups according to their uses. Of some only the flower is serviceable; and of these some are sweet-scented, as gilliflower, some scentless, as carnation and wallflower. Of others again the branches leaves and in fact the whole growth are sweet-scented, as with tufted thyme calamint bergamot-mint and the rest. Both groups however belong to the under-shrubs. And of the first-mentioned, those valued for their flowers, the growth is in most cases that of undershrubs, (in some annual merely, in others of longer duration) except in the violet; for this is altogether without branches, its leaves grow close to the root, and it is always in leaf; while, as some say, it is able to bear flowers continuously, if it is tended in a certain way. This may be considered a peculiar characteristic of this plant.

[6.3] Of the others, or rather of all the group, the general appearance is in each case plain to all; any peculiarities that they may exhibit we must mention, for instance, if some appear to have but a single form, while others have various forms.

[6.4] Thus those of woody character, as tufted thyme bergamot-mint calamint, have but one form, unless one counts wild and cultivated, scented and scentless plants, as belonging to distinct forms; and again there are with these plants differences of culture of position and of climate. Some also of the group valued for their flowers have each but one form, for instance, the black ion (violet); for this does not appear to have different forms like the white ion (gilliflower) in which the colour evidently varies; as does still more that of the lilies, if it be true, as some say, that there is a crimson kind.

[6.5] Among roses there are many differences, in the number of petals, in roughness, in beauty of colour, and in sweetness of scent. Most have five petals, but some have twelve or twenty, and some a great many more than these; for there are some, they say, which are even called 'hundredpetalled.' Most of such roses grow near Philippi; for the people of that place get them on Mount Pangaeus, where they are abundant, and plant them. However the inner petals are very small, (the way in which they are produced being such that some are outside, some inside). Some kinds are not fragrant nor of large size. Among those which have large flowers those in which the part below the flower is rough are the more fragrant. In general, as has been said, good colour and scent depend upon locality; for even bushes which are growing in the same soil shew some variation in the presence or absence of a sweet scent.

Sweetest scented of all are the roses of Cyrene, wherefore the perfume made from these is the sweetest. (Indeed it may be said generally that the scents of the gilliflowers also and of the other flowers of that place are the purest, and especially the scent of the saffron-crocus (a plant which seems to vary in this respect more than any other). Roses can be grown from seed, which is to be found below the flower in the 'apple' and is like that of safflower or pine-thistle, but it has a sort of fluff, so that it is not unlike the seeds which have a pappus. As however the plant comes slowly from seed, they make cuttings of the stem, as has been said, and plant them. If the bush is burnt or cut over, it bears better flowers; for, if left to itself, it grows luxuriantly and makes too much wood. Also it has to be often transplanted; for then, they say, the roses are improved. The wild kinds are rougher both in stem and in leaf, and have also smaller flowers of a duller colour.

[6.6] The black ion (violet) differs from the white ion (gilliflower) not only in other respects but in the plant itself, in that in the former the leaves are broad, lie close to the ground, and are fleshy, and there is much root.

[6.7] Krina (lilies) shew the variation in colour which has been already mentioned. The plant has in general a single stem, but occasionally divides into two, which may be due to differences in position and climate. On each stem grows sometimes one flower, but sometimes more; (for it is the top of the stem which produces the flower) but this sort is less common. There is an ample root, which is fleshy and round. If the fruit is taken off, it germinates and produces a fresh plant, but of smaller size; the plant also produces a sort of tear-like exudation, which men also plant, as we have said.

[6.8] The narcissus or leirion (for some call it by the one name, some by the other) has its ground-leaves like those of the asphodel, but much broader, like those of the krinon (lily); its stem is leafless and grass-green and bears the flower at the top; the fruit is in a kind of membrane-like vessel, and is very large, black in colour, and oblong in shape. This as it falls germinates of its own accord; however men collect and set the seed, and also plant the root, which is fleshy round and large. The plant blooms very late, after the setting of Arcturus about the equinox.

[6.9] The saffron-crocus is herbaceous in character, like the above-mentioned plants, but has a narrow leaf; indeed the leaves are, as it were, hair-like; it blooms very late, and grows either late or early, according as one looks at the

season; for it blooms after the rising of the Pleiad and only for a few days. It pushes up the flower at once with the leaf, or even seems to do so earlier. The root is large and fleshy, and the whole plant vigorous; it loves even to be trodden on and grows fairer when the root is crushed into the ground by the foot: wherefore it is fairest along the roads and in well-worn places. It is propagated from the root.

[6.10] These are the ways then in which the above plants are grown. All the above-mentioned flowers are grown from seed, as gilliflower, carnation, spikelavender, wall-flower, martagon-lily; these plants themselves, as well as their roots, are woody. Drop-wort is also grown from seed; for that too is a plant grown for its flower. These and other plants like them may serve as examples of plants grown for their flowers.

[7.1] All the others flower and bear seed, though they do not all appear to do so, since in some cases the fruit is not obvious. Indeed in some the flower too is inconspicuous, but, because these grow slowly and with some difficulty, men propagate them rather by off-shoots, as was said at the beginning. However some contend that they have no fruit: and there are men who have actually tried with the following plants; they have, they say, themselves often dried and rubbed out and sown the apparent fruit of thyme calamint bergamot-mint and green mint (for even that they have tried) and there was no germination from such sowing. However, the account given above is the truer, and the character of the wild forms testifies to this; for there is also a wild thyme (Attic thyme), which they bring from the mountains and plant at Sicyon, or from Hymettus and plant at Athens; and in other districts the mountains and hills are quite covered with it, for instance in Thrace. There is also a wild bergamot-mint, and wild forms of the other plants mentioned, having a more pungent smell. Thyme is sometimes quite like cultivated thyme.' Now it is plain that these wild forms possess this means of reproducing themselves.

[7.2] Southernwood actually grows more readily from seed than from a root or a piece torn off (though it grows even from seed with difficulty); however it can be propagated by layering in pots in summertime, like the 'gardens of Adonis'; it is indeed very sensitive to cold and generally delicate even where the sun shines brightly; but, when it is established and has grown, it becomes tall and strong and tree-like, like rue, except that the latter is much more

woody drier and less succulent.

[7.3] Sweet marjoram grows in either way, from pieces torn off or from seed; it produces a quantity of seed, which is fragrant with a delicate scent; it can also be transplanted. Southernwood also produces much seed, which has some scent. This plant has straight roots which run deep; it has, as it were, its single stout root, from which the others spring; while sweet marjoram thyme bergamot-mint and calamint have surface roots which are much divided and matted; in all these plants the roots are woody, but especially in southernwood, because of its size and because it is so dry. The growth of the shoots of thyme is peculiar. If it has a stake, or is planted against a wall, it can send them out to any length; so also if it is let grow downwards; indeed it is most vigorous when grown into a pit. It is not possible to distinguish different forms of the cultivated kind, as has been said, but they say that of the wild kind (Attic thyme) there is more than one form; for that of the kind which grows on the mountains one form is like savory and very pungent, while the other is fragrant and more delicate.

[7.4] The season for planting most of these is autumn, and then men hasten to plant them as early as possible; however some are planted also in spring. All of them love shade, water, and especially dung; however thyme is patient of drought and, in general, needs moisture less than the others. These plants especially delight in the dung of beasts of burden; and it is said that they should often be transplanted, for that it improves them, while bergamot-mint, as has been said, actually degenerates if it is not transplanted.

[8.1] Of the flowers the first to appear is the gilliflower; where the air is mild, it appears as soon as winter comes, but, where it is more severe, later, sometimes in spring. Along with the gilliflower, or a little later, appears the flower called the wild wallflower. These, of all the flowers that the garlandmakers use, far outrun the others. After these come pheasant's eye and polyanthus narcissus (and, among wild plants, the kind of anemone which is called the 'mountain anemone') and the 'head' of pursetassels; for this too some interweave in their garlands. After these come dropwort violet, and of wild plants, gold-flower, the meadow kind of anemone corn-flag hyacinthos (squill), and pretty well all the mountain flowers that are used. The rose comes last of these, and is the first of the spring flowers to come to an end, as it is the first to appear, for its time of blooming is short. So too is that of the

rest of the wild plants mentioned, except hyacinthos the wild kind (squill), and also the cultivated (larkspur); this lasts on, and so does the gilliflower, and for a still longer time the wallflower, while the violet, as has been said, blooms throughout the year, if it receives tendance. So too dropwort (for that too is one of the plants valued for their flowers, though it is herbaceous in character) if one pinches off and removes the flower instead of letting it go to seed, and if, further, it has a sunny position. The flower is clustering and white, like that of the wild These then are, we may say, the plants of spring.

[8.2] The following belong rather to summer: rosecampion carnation krinon (lily) spike-lavender and the Phrygian sweet marjoram]; also the plant called ‘regret,’ of which there are two kinds, one with a flower like that of larkspur, the other not coloured but white, which is used at funerals; and this one lasts longer. The iris also blooms in summer, and the plant called soap-wort, which has a beautiful flower but is scentless. In autumn bloom the other kind of narcissus, the crocus, both the scentless mountain form and the cultivated one (saffron crocus); for these bloom directly the first rains come. The fruit of the cotoneaster and the flower of the smilax, both of them wild plants, are also used in garlands.

[8.3] Such are the seasons at which each appears; and, to speak generally, there is no interval of time nor flowerless period, but even winter produces flowers, for all that it seems to be unproductive by reason of the cold, since the autumn flowers continue into winter, and to a much greater extent if the season be mild. For all things, one may say, or at least most of them, extend beyond their proper season, and all the more if the place be sunny; so that there is a continuous succession. These then are the periods and seasons at which the various flowers are produced.

[8.4] The life of the gilliflower is at most three years; as it ages it degenerates and produces paler flowers. A rose-bush lives five years, after which its prime is past, unless it is pruned by burning; with this plant too the flowers become inferior as it ages. Position and a suitable climate contribute most to the fragrance of roses, gilliflowers and other flowers. Thus in Egypt, while all other flowers and sweet herbs are scentless, the myrtles are marvellously fragrant. In that country it is said that the roses gilliflowers and other flowers are as much as two months ahead of those in our country, and

also that they last a longer, or at least not a shorter, time than those of our country.

[8.5] And, as has been said, the particular season according to its character, makes a great difference to the fragrance, not only by reason of rains and droughts, but also according as rain, wind, and in general, the changes of climate occur or do not occur at the fitting moment. Also it appears that in general roses gilliflowers and the rest bloom well on the mountains, but many of them have there an inferior scent. Concerning coronary plants and undershrubs in general these examples and others like them suffice for our enquiry.

BOOK VII. OF HERBACEOUS PLANTS, OTHER THAN CORONARY PLANTS: POT-HERBS AND SIMILAR WILD HERBS.

[1.1] Next we have to tell of herbaceous plants: for this class remains of those which we distinguished at the outset, and it includes to some extent the classes of pot-herbs and of cereals. And first we must speak of the class of pot-herbs, beginning with the cultivated kinds, since it happens that these are better known than the wild kinds.

[1.2] There are three seed-times for all things grown in gardens, at which men sow the various herbs, distinguishing by the season. One is the 'winter' seed-time, another the 'summer' and the third is that which falls between these, coming after the winter solstice. These terms however are given in regard not to the sowing, but to the growth and use of each kind; for the actual sowing takes place, one might almost say, at the opposite seasons. Thus, the 'winter' period begins after the summer solstice in the month Metageitnion, in which they sow cabbage radish turnip, and what are called 'secondary crops' that is to say, beet, lettuce, rocket, monk's rhubarb, mustard, coriander, dill, cress; and this is also called the 'first' period of cultivation. The second period begins after the winter solstice in the month Gamelion, in which they scatter or plant the seed of leeks, celery, long, orach. The third period, which is called the 'summer' period, begins in the month Munychion: in this are sown cucumber gourd blite basil purslane savory. Moreover they make several sowings of the same herb at each season, as of radish basil and the others. And at all the periods are sown the 'secondary crops.'

[1.3] Not all herbs germinate within the same time, but some are quicker, others slower, namely those which germinate with difficulty. The speediest are basil, blite, rocket, and of those sown for winter use, radish; for these germinate in about three days. Lettuce takes four or five, cucumber and gourd about five or six, or, as some say, seven; however, cucumber is earlier and quicker than the others. Purslane takes a longer time, dill four days, cress and mustard five. Beet in summer takes six days, in winter ten, orach takes eight, and turnip ten. Leek and long onion do not take the same time, but the former nineteen to twenty days, the latter ten to twelve. Coriander germinates with difficulty; indeed fresh seed will not come up at all unless it is moistened.

Savory and marjoram take more than thirty days; but celery germinates with the greatest difficulty of all; for those who make the time comparatively short say forty days, and others fifty, and that too, at whichever period it is sown, for some sow it as a 'secondary crop' at all the periods.

[1.4] Generally speaking, those herbs which are sown at more than one season do not mature faster in the summer. Howbeit it is strange if the season and the state of the atmosphere do not contribute at all to quicker growth, and if, when there is an unfavourable cold season and the atmosphere is cloudy, these conditions do not tend to make growth slower, seeing that, when stormy or fair weather follows the sowing, germination is slower or quicker accordingly. And there is another thing which makes a difference as to the raising of the various herbs; germination begins earlier in sunny places which have an even temperature.

[1.5] As a matter of fact, to speak roundly, the causes of such differences must be found in several different circumstances, in the seeds themselves, in the ground, in the state of the atmosphere, and in the season at which each is sown, according as it is stormy or fair. However it is a point for consideration with which herbs the time of sowing makes a difference and with which it makes none; thus it is said that radish germinates on the third day whether it be sown in summer or in winter, while beet, as has been said, behaves differently according to the season. Anyway such are and are said to be the seasons of germination in each case.

[1.6] Another thing which makes a difference as to the rapidity with which the seeds germinate is their age; for some herbs come up quicker from fresh seed, as leek, long onion, cucumber, gourd; (some even soak the seed of cucumber first in milk or water, to make it germinate quicker). Some come up quicker from old seed, as celery beet cress savory coriander marjoram (unless indeed they are raised from fresh seed in the manner which we have mentioned). There is, they say, a singular feature about beet; the seed does not all germinate at once, but some of it not for some time, some even in the next or in the third year; wherefore it is said that little comes up from much seed.

[1.7] Any of the seeds, if they are ripe when they fall, last till their own proper season and do not sprout till then. And in this they are consistent; for we note that the same thing happens with the seed of wild plants, unless it is destroyed. However all mature their fruits in the summer, though sooner and

quicker, generally speaking, when they are sown earlier. The season also makes a difference; things sown in the hot season push up their shoots and go to seed sooner, as radish and turnip. Some however bear their fruit not in the same year but in the next, as celery leek long onion, which plants also last a longer time, and are not annual; for most herbs wither with the ripening of their seed.

[1.8] Generally speaking, all those that push up shoots and mature their fruit reach their perfection of form in having side-shoots branching from the main stem except those which have but a single stem, as leek, long onion, onion, garlic.

[1.9] All these herbs are lovers of water and of dung, and especially the weaker ones, which require more attention or in some cases more feeding.

[2.1] All these herbs are propagated from seed, and some also by a piece torn off, a shoot, or a piece of root. Cabbage is propagated by a piece torn off, since it is essential in this case to take a piece which has root attached to it. From cuttings are grown rue marjoram basil; for slips of this too men plant when it has grown to the height of a span or more, cutting off half the plant. By root are planted garlic onion purse-tassels cuckoo-pint and in general such bulbous plants. Such propagation is also possible in cases where the roots persist for more than a year, though the shoots last but for a year. And it is plain that all these herbs can be grown from seed; for even rue can (which some deny), though the process is slow, and so cuttings are also taken.

[2.2] Of those which are propagated by a piece of root the root is long-lived, though the plant itself may be annual; wherefore the roots of such plants make offsets and so increase; and this is true not only of plants cultivated in the garden, but also of wild plants, as we have said, for instance of purse-tassels long onion squill and so forth. Some plants even which are not bulbous but longer-lived make offsets, as celery and beet; for these send out roots from which grow leaves and stems. Long onion and leek also make offsets, sending out a 'head' below, like the bulb of purse-tassels, from which the leaves spring; but this only takes place when the stem has withered and the seed has been removed. But, as the 'heads' of such plants are not useful, they do not collect them for storing dry; wherefore also they do not plant these. It may be that somehow these are akin and closely allied to onion, wherefore what has been said is not surprising. However in all those plants, both wild and

cultivated alike, which have an annual stem, but yet live longer than a year, there is an outgrowth of the roots, just as there is in under-shrubs and shrubby plants: while in onions garlic and purse-tassels even a number, as it were, of such roots is formed. In fact, they are reproduced in three ways, as has been said; from seed in all cases and from the stem and root in those specified.

[2.3] Almost all shoot again if the stem is broken (except those which are stemless), but most obviously basil lettuce cabbage, which are, as it were, broken for a practical reason. Indeed they say that the stems of lettuce which thus grow again are sweeter, for that the original stem has a taste like fig-juice and is bitter, as being not properly ripened. Some however say that the later stems have the taste of fig-juice more than the original one, but that, so long as they are tender, they appear sweeter. Be that as it may, it is admitted that in the case of cabbage the stem is sweeter if it should have grown again after being broken, provided that the leaves are stripped off before the plant runs to stalk.

[2.4] In most cases the roots persist, but they do not in all cases produce fresh growth. Thus radish and turnip persist till summer, if earth is thrown on them, and they increase in size; and some gardeners do this deliberately; but they do not make fresh growth nor send out leaves, even if one removes the earth heaped over them. And this may also be observed in other plants. However, most pot-herbs have the single stout root which runs deep; for even in those which produce these side-roots of equal stoutness, as celery and beet, the side-growth comes, as it were, from the middle root and it is not separate to start with; but to this single root are attached the small out-growths, both in radish and in turnip. These instances are familiar to all because of the use which is made of these plants.

[2.5] The beet has a single long stout straight root like that of the radish, and has stout out-growths, sometimes two, sometimes three, sometimes only one, and the small ones are attached to these. The root is fleshy and sweet and pleasant to the taste, wherefore some even eat it raw. The 'bark' is not thick and cannot be detached, like that of the radish, but rather resembles that of alexanders. In like manner the root of orach is single and runs deep, and other roots are attached to it.

[2.6] Monk's rhubarb however has a single root in a truer sense than any of the others, for it has no stout out-growths of root, but only the slender ones; its

root also runs deeper than that of the others, being more than a foot and a half long. The wild sort however has a shorter root, and has several stems and branches, and its shape, as a whole, when fully grown resembles that of beet. Cultivated monk's rhubarb moreover is longer lived than the wild form, and, in general, we may say, than any other pot-herb, for, they say, it may live any time. It has a fleshy root, full of moisture, wherefore, if pulled up, it will live some time.

[2.7] Basil has the single stout root, the one which runs deep, and the others at the sides are slender and fairly long.

[2.8] Some herbs, as blite, have not the single straight root, but a number of roots which start directly from the top and are of a good stoutness and longer than those of orach.

[2.9] The roots of basil are woodier than those of any of the other herbs, as also is its stem; for those of blite orach and the like are less woody. In general we may say that the roots of any of these herbs are either woody or fleshy. Examples of fleshy roots are beet, celery, alexanders, monk's rhubarb, radish, turnip, and especially all 'heavy-headed' kinds, for the roots of these do not wither up altogether even when they are dried. Examples of those with woody roots are basil, blite, orach, rocket, dill, coriander, and in general, those with fibrous stems; for in dill and coriander, which have a single root, the root is woody and not long, and the slender side-roots from it are not numerous; but both plants have several stems and branches; wherefore in neither of these plants does the part above ground correspond to the part which is below.

[2.10] The following have short roots: lettuce and purslane, in which both the straight main root and the side ones are short. Lettuce may be said to have no such side-roots, but only the slender ones, and may be called in the strictest sense a plant of a single root. In general all summer herbs have short roots: we may include cucumber gourd and bottlegourd, both because of the season to which they belong and perhaps still more because of their character, which corresponds to the season. However the transplanted lettuce has a shorter root than one that is raised from seed, since it is more apt to send out side-growths; also the wild kind has a shorter root than the cultivated, and the part above ground has more stems.

[3.1] All, except one, of these herbs produce all their bloom at once, but basil has a succession of flowers, the lower part of the plant flowering first, and

then, when that bloom is over, the upper part. Wherefore its season of bloom is a long one, like that of the bean, and among herbaceous plants that of the plant called heliotropion, and also other wild plants. Cucumber also has a long period of bloom, for this plant has a second growth. The flowers are in some cases whitish, in others quince-yellow, in others somewhat reddish; but the flower is never of a bright colour.

[3.2] The seeds too differ in shape; most are round, but some are oblong; some again are broad and leaflike, as those of orach, for the seed of this is like that of silphium; others again are narrow or marked in lines, as those of cummin. They also vary in colour, some being black, some the colour of wood, some paler. The seeds of all are either in pods or naked, or have an integument or have a pappus. Radish mustard and turnip have their seeds in pods; coriander fennel dill and cummin, have naked seeds; those of blite beet orach and basil are enclosed in an integument; those of lettuce have a pappus on them.

[3.3] All have numerous fruits and numerous shoots, but cummin has the most fruits of all. And there is another peculiarity told of this plant: they say that one must curse and abuse it, while sowing, if the crop is to be fair and abundant.

[3.4] Nearly all of these, except cummin, are hard to dry for keeping, unlike corn; for this, when once it is ripened, quickly dries and is shed, and the herbs whose seed have an integument are harder still to dry, especially basil. All however, when dried, produce more fruit: wherefore it is the custom to gather the seed early and dry it. All of them are prolific and produce many seeds, but basil produces most of all.

[3.5] Examples of those which produce their fruit at the top of the stem are basil leek onion: of those which produce it rather at the sides, radish turnip and the like; of those which produce it in both ways, blite and orach; both of these produce it at the side as well as at the top; in fact blite has its seed in clusters, closely attached to each branch. Some push up their shoots fairly soon from old seed, but seed from plants in their prime is the most rapid; for these plants too have a time when they are at their best. The beauty of the plant also corresponds in proportion, provided that equal care in other respects is shewn in cultivation.

[3.6] It likewise appears that, if a quantity of seed is sown in the same place,

the resulting crop comes up and germinates better; thus they tie up seed of leek and celery in a piece of cloth before sowing, and then there is a large crop.

[3.7] The position also contributes to growth; at least, when celery is transplanted, they suggest that one should hammer in a peg of whatever size one wishes to make the celery; and also that one should sow the seed in a piece of cloth after hammering in a peg and filling the hole with dung and soil.

[3.8] Some things again come to resemble in their shape even the position in which they grow: thus the bottle-gourd becomes like in shape to the vessel in which it has been placed.

[3.9] Moreover differences in taste are acquired in some cases when the seed has been treated specially beforehand; for instance, the seed of the cucumber produces a fruit with different taste if it is soaked in milk before sowing. But such matters belong perhaps more properly to the subject of cultivation.

[4.1] Of some herbs there are several kinds, but of others only one, as basil monk's rhubarb blite cress rocket orach coriander dill rue; of each of these they say that there is but one kind. But of others there is more than one, as radish cabbage beet cucumber gourd cummin garlic lettuce. Differences are marked in the leaves, the root, the colour, the taste, and so forth.

[4.2] Thus of radish they recognise these various kinds the Corinthian, that of Cleonae, the Leiothasian, amorea, the Boeotian. The Corinthian is said to be the strongest in growth, and it has an exposed root; for it pushes upwards, and not downwards like the others. The Leiothasian is called by some the Thracian radish, and it stands the winter best. The Boeotian is said to be the sweetest and to be round in shape, not of a long shape like that of Cleonae. Those kinds whose leaves are smooth are sweeter and pleasanter to the taste, those whose leaves are rough have a somewhat sharp taste. Besides the above-mentioned kinds there is yet another, whose leaves resemble those of rocket. These then are the different kinds of radish.

[4.3] Of the turnip all do not agree that there are several kinds, but some say that the only difference is between the 'male' and the 'female,' and that both forms come from the same seed. In order to produce 'female' plants it is said that the seed should be sown thinly, for that, if it is sown thick, the result is all 'male' plants; and that the same result follows if the seed is sown in poor soil.

Wherefore, when they are shifting plants for seeding, they plant the seedlings wide apart. Good and inferior seed can be easily distinguished by their appearance; the seed of a good plant is fine, that of a poor one coarse. Both this plant and radish like exposure to winter; for it is supposed that this makes them sweeter and that they are thus made to grow roots rather than leaves. With a south wind and warm weather they run up quickly. It needs explanation that both plants should thus adapt themselves in special ways.

[4.4] Of cabbage three kinds are distinguished, the curly-leaved, the smooth-leaved, and thirdly, the wild form. The wild form has a small round leaf, it has many branches and many leaves, and further a sharp medicinal taste; wherefore physicians use it for the stomach. Between the other two kinds there seem also to be differences, inasmuch as one of them bears no seed or only inferior seed. In general the curly-leaved kind has a better flavour than the smooth and it has larger leaves.

[4.5] So too with beet; the white kind has a better flavour than the black and produces fewer seeds; some call it 'Sicilian' beet.

[4.6] So too with lettuce; the white kind is sweeter and tenderer. Of this plant there are three other kinds, the flat-stalked, the round-stalked, and the Laconian; the last-named has a leaf like the golden thistle, but is erect and strong-growing and has no side-shoots from the main stem. Of the 'flat' kinds some have such flat stalks that some, they say, use them to make a garden trellis. The third kind, which has much milky juice and small leaves and a whiter stem, is like a wild plant.

[4.7] In celery the differences between the various kinds lie in the leaves and stem; one kind is close and curly and has rough leaves, the other is more open in growth and flatter, but has a larger stalk. Again there are kinds with stems white, red or particoloured; and in general all such forms resemble more the wild kind.

[4.8] As to cucumber and gourd, it is said that there are various forms of the former, but of the latter, just as in radish and turnip, the differences are only between better and inferior individuals. Of the cucumber there are three forms, the Laconian the cudgel-shaped and the Boeotian. Of these the Laconian is better with moisture, the others without it.

[4.9] There are also various kinds of onion and of garlic; those of the onion are the more numerous, for instance, those called after their localities Sardian,

Cnidian, Samothracian; and again the 'annual' the 'divided' (shallot) and that of Ascalon. Of these the annual kind is small but very sweet, while the divided and the Ascalonian differ plainly as to their character as well as in respect of their cultivation. For the 'divided' kind they leave untended in winter with its foliage, but in spring they strip off the outside leaves and tend the plant in other ways; when the leaves are stripped off, others grow, and at the same time division takes place under ground, which is the reason of the name 'divided.' Some indeed say that all kinds should be thus treated, in order that the force of the plant may be directed downwards and it may not go to seed. The Ascalonian kind has a somewhat peculiar character; it is the only kind which does not divide and which does not, as it were, reproduce itself from the root; moreover in the plant itself there is no power of increasing and multiplying; wherefore many do not plant these, but raise them from seed; and the sowing is made late, towards the spring; and then, when the seed has germinated, they transplant. And the plant arrives at maturity so fast that it is taken up with the others or even earlier; whereas, if it is left a longer time in the ground, it rots. If planted on the other hand, it sends up a stem and merely produces seed, and then shrivels up and withers. Such then is the character of these.

[4.10] Some also shew differences in colour; thus at Issus are found plants which in other respects resemble the others, but which are extremely white in colour; and they bear, 'it is said, onions like those of Sardis. Most distinct however is the character of the Cretan kind, which resembles to some extent that of Ascalon, if indeed it be not the same. For in Crete there is a kind which when sown produces a root, but when planted produces a stem and seed but has no 'head'; and it is sweet in flavour. This kind in fact has just the contrary character to the others; for they all grow better and faster when they are planted. All are planted after the rising of Arcturus while the earth is still warm, so that the rains may come upon them after planting. They are planted either entire or else in sections made by cutting at the 'head.' The growth which results is not uniform; from the lower part comes an onion, from the upper only foliage; while, if the plant is divided vertically, no growth at all takes place. The kind called horn-onion has no head/ but has as it were a long neck, at the top of which comes the new growth; it is often cut, like the leek; wherefore it is raised from seed and not planted. Such then, one may say, are

the forms of the onion.

[4.11] Garlic is planted a little before or after the solstice, when it divides into cloves. There are different kinds distinguished as late or early, for there is one kind which matures in sixty days. There are also differences as to size. There is one kind which excels in size, especially that variety which is called Cyprian, which is not cooked but used for salads, and, when it is pounded up, it increases wondrously in bulk, making a foaming dressing. There is a further difference, in that some kinds cannot be divided into cloves. The sweetness of taste and smell and the vigour depend on the position and on cultivation, as with other herbs. Garlic reaches maturity from seed, but slowly, for in the first year it acquires a 'head' which is only as large as that of the leek, but in the next year it divides into cloves, and in the third is fully grown, and is not inferior, indeed some say it is superior, to the garlic which has been planted. The growth of the root in garlic and onion is not the same; in garlic, when the clove has swollen, the whole of it becomes convex; then it increases and divides again into the cloves, and becomes several plants instead of one by the maturing of the 'head,' while the onion puts out another and another growth straight from the root, as do purse-tassels and squill and all such plants. For both onions and garlic multiply if they are not removed but left alone. They say also that garlic produces garlic heads on the stalk, and that the onion in like manner produces onions. Let this suffice for an account of their ways of growth.

[5.1] All the pot-herbs are lovers of water and of dung, except rue, which does not at all like dung; this is true of the winter no less than of the summer herbs, and of the tender no less than of the strong ones. The dung which is most commended is that which is mixed with litter, while that of beasts of burden is held to be bad, because it is most apt to lose its moisture. Dung which is mixed with the seed is most in request, but some cast the manure on while they are sowing, and they also use fresh human dung as a liquid manure. The winter crops like moisture more than the summer ones, and the weak more than the strong, as well as those which specially need feeding. Onion and long onion also love moisture, though some say that they do not require it, if at the outset it has been applied twice or thrice. Fresh cold water is the best, and the worst is that which is brackish and thick: wherefore the water from irrigation ditches is not good, for it brings with it seeds of weeds.

Rain-water is good, for it also appears to destroy the pests which devour the young plants. Some however say that rain-water is not good for melons nor for onions. Most herbs are watered in early morning or at evening, so that they may not be dried up; but basil is watered even at noon, for it is said that it grows more quickly if it is watered at first with warm water. In general water seems to be extremely beneficial, especially if it is mixed with dung; for, they say, pot-herbs often are hungry, and experienced gardeners can recognise when this is so.

[5.2] All herbs grow finer and larger if transplanted; for even the size of leeks and radishes depends on transplantation. Transplanting is done especially in view of collecting seed: and, while most herbs bear it well, as long onion leek cabbage cucumber celery turnip lettuce, others bear it less well. All however make better growth and are larger if the seed is planted rather than scattered.

[5.3] As for pests, radish is attacked by spiders, cabbage by caterpillars and grubs, while in lettuce, leek, and many other herbs occur 'leek-cutters.' These are destroyed by collecting green fodder, or when they have been caught somewhere in a mass of dung, the pest being fond of dung emerges, and, having entered the heap, remains dormant there; wherefore it is then easy to catch, which otherwise it is not. To protect radishes against spiders it is of use to sow vetch among the crop; to prevent the spiders from being engendered they say that there is no specific. Basil turns pale about the rising of the dog-star, and coriander becomes mildewed. In these instances we may observe the accidents which occur to pot-herbs.

[5.4] Of seeds some have more vitality than others as to keeping; among the more vigorous ones are coriander beet leek cress mustard rocket savory, and in general those of pungent taste; among the less vigorous are long onion which will not keep orach basil gourd cucumber; and in general the summer herbs keep less well than the winter ones. No seed will keep more than four years so as still to be of use for sowing; though it is better in the second year, in some cases it does not deteriorate in three years, but after that time deterioration begins.

[5.5] However for cooking purposes seed will keep a longer time, except that such seed must necessarily become less vigorous by reason of evaporation and destruction by worms. The chief cause of loss is vermin; for vermin occur

in all the seeds, even those which are pungent, though least in the gourd tribe; such seeds however, as they lose their moisture, become bitter in taste and inferior for use. Let this suffice for an account of the seeds and in general of herbs cultivated in gardens.

[6.1] We must now endeavour to speak in the same way of the wild kinds and of those which are called uncultivated herbs. Some of these have the same names as the cultivated kinds; for all these kinds exist also in a wild form, and most of them resemble the cultivated kinds in appearance, except that in the wild forms the leaves and also the stalks are smaller and rougher, and in particular these forms are more pungent and stronger in taste, for instance, savory marjoram cabbage and rue; the wild monk's rhubarb (dock) indeed, though it has a pleasanter taste than the cultivated, yet has a sharper flavour; and this is the chief difference. Moreover all the wild kinds are less juicy than the cultivated, and perhaps this is the very reason why most of them are more pungent and stronger.

[6.2] A peculiarity of 'wild cabbage' as compared with the others is that its stems are rounder and smoother than in the cultivated kind, and, while in the latter the attachment of the leaf is flat, in the wild kind it is rounder, and the leaf itself has less angles; in other cases the wild form is the rougher both in stem and leaf. The wild turnip has a long root, like that of the radish, and a short stem.

[6.3] The wild lettuce has a shorter leaf than the cultivated kind, and, as the plant matures, it becomes spinous; the stem is also shorter, while the juice is pungent and medicinal. It grows in fields; they extract its juice at the time of wheat-harvest, and it is said that it purges away dropsy and takes away dimness of sight and removes ulcers on the eye; for which purpose it is administered in human milk.

[6.4] 'Horse-celery' (alexanders), 'marsh-celery' and 'mountain-celery' (parsley) differ both from one another and from the cultivated kind; 'marsh-celery,' which grows by irrigation-ditches and in marshes, has scanty leaves, and is not of close habit, yet it somewhat resembles the cultivated kind in smell taste and appearance. 'Horse-celery' has a leaf like that of the marsh kind, but is of close habit and has a big stalk, and its root is as thick as a radish and black; the fruit is also black, and in size is larger than the seed of a vetch. They say that both kinds are serviceable in cases of strangury and for

those suffering from stone, being administered in sweet white wine. Both kinds grow equally everywhere. There is also a sort of gum which exudes from the plant, like myrrh, and some say that it is myrrh.

[6.5] ‘Mountain-celery’ (parsley) exhibits even greater differences; its leaf is like that of hemlock, the root is slender, and the fruit like that of dill, but smaller; it is given in dry wine for diseases of women.

[6.6] In some cases however the wild kinds are not in the least like the cultivated in taste and properties; thus the wild and the cultivated cucumber are quite different, and their resemblance is due only to their general look, as, among coronary plants, there is resemblance between the wild and the cultivated kinds of gilliflower; for the leaves are alike. We have then described the differences which these plants present.

[7.1] Next we must speak of the differences found in the herbs called ‘uncultivated,’ and in general in any herbaceous plants which are not edible. For we give the name of ‘pot-herbs’ to those which are cultivated for our own use, but in a wider sense the term includes these also; wherefore we must speak of them too. Under the name ‘pot-herbs’ are included also such plants as chicory, dandelion, khondrylla, cat’s ear, groundsel, and in general all those that are called ‘chicory-like’ because of the resemblance in the leaves; for to a certain extent the leaves of all these are like those of chicory; and we may add kaukalis, chervil, green mint. Some include under the name countless others, as wild chervil and all plants that resemble it, and goat’s beard, which some call home (‘hair’), which has a long sweet root and leaves like those of the crocus, but longer, and a short stem, on which is set the sheath; this is large, and on the top is the large mass of grey pappus, from which it gets its name of ‘goat’s beard.’

[7.2] In like manner all those may be included which have a similar appearance, but juices suitable for food whether raw or cooked; for some need the action of fire, as malakhe (cheese-flower) beet, monk’s rhubarb, nettle, and bachelor’s buttons; while garden nightshade is also eaten raw, and some in former times considered it worth growing in gardens. There are also many more, including the plant which has become proverbial for its bitterness, blue pimpernel, which has a leaf like basil. All these are either annual or have annual stems; for some of them wither away altogether in one season, while of others the roots persist for a longer time, and to this class belong the majority.

[7.3] Some of these plants grow from roots and also from seed unless in some cases they come up spontaneously. The growth alike of these and of others takes place in some cases with the first rains after the equinox, for instance, dandelion ribgrass and the plant which some call buprestis; in other cases after the rising of the Pleiad, for instance, chicory and most of the plants of that class. Some produce their flower immediately at the time of making growth, as lesser celandine, some not long after, as anemone, while some as soon as spring comes send up both their stems and flower, as chicory and the plants which resemble it, and those spinous plants which come under the head of pot-herbs.

[7.4] There is much difference in the flowers, of which we have spoken already; for such difference is a thing common to all; and some are altogether flowerless, as stonecrop. Those which produce their flower with the stem quickly shed the flower; except that dandelion, when the first flower is past its prime, produces another and yet another, and continues to do so right through the winter and spring up to the summer. Groundsel also blooms for a long time; the others however do not do this; for instance the crocus does not, neither the scented (saffron crocus) nor the white nor the spinous kind, which last are scentless.

[8.1] A distinction which is found in all herbaceous plants alike is the following: some have straight and fibrous stems, some prostrate stems, as malakhe (cheese-flower), wild chervil, 'wild cucumber' (squirting cucumber); while heliotropion has this character to an even greater extent, and so, among spinous plants, have caltrop, caper and several others; for in these too the above-mentioned distinction is even more marked. Some again have clasping stems, but if they have nothing on which to throw themselves, their stems become prostrate, as epetine bedstraw and in general those which have a slender soft long stem; wherefore these in general grow in the midst of other plants. This point of difference too is common not only to all herbaceous plants and under-shrubs, but also to shrubby ones; for helix (ivy) has a clasping stem, and, still more, smilax.

[8.2] Again of herbaceous plants too some have several stems, some only one; and of the latter some have no side-shoots along the stem, while others have side-shoots, for instance, among cultivated plants radish and some others. Those with prostrate stems have generally more than one, while those

with erect stems have but one or a few. Of these those with smooth stems have no side-shoots, as onion leek garlic the wild, as well as the cultivated forms; and of these again some have straight, some crooked stems.

[8.3] There is also the following point of difference in herbaceous plants: some have their leaves on the ground, some on the stem, some have both characters. The following have ground leaves: crowsfoot, the anthemion whose flowers have no petals (wild camomile), alkanet grass, anemone, hawk's beard, plantain, dandelion; the following have leaves on the stem ox-tongue, the anthemion which has petalled flowers, trefoil, gilliflower; while chicory has both kinds of leaves; for this plant produces, as well as leaves, a certain number of flowers on the stems at the points where the side-shoots are attached. Similar too are some of the plants with spinous leaves, but not those that are altogether spinous, as sow-thistle.

[9.1] Again some are barren, while others bear fruit, and, speaking generally, of herbaceous plants some get as far as producing leaves only, others have a stem and flower, but no fruit; some again have fruit as the completion of their development, while some bear fruit even though they have no flower, as is the case with some trees.

[9.2] The leaves of herbaceous plants again differ in hardly fewer, nay, even in more, ways than those of trees, and further, they present differences as compared with these, the chief being perhaps that some are attached by a leaf-stalk, some are attached directly, some attached with cauline appendages. And in some herbaceous plants the stalk is the first part to grow, but in most the leaves, which almost at the outset grow to their largest and are best for eating; whereas the leaves of trees always push out first a sort of stalk.

[9.3] There is also much difference as to the flowers between herbaceous plants and trees; for in trees most of the flowers are white, while some are slightly reddish, others are greenish or greenish-yellow, but none of them have distinct gay colours; while in herbaceous plants the flowers shew many and various colours, both simple and in combination, and further, some of them are scented, others not. Again trees produce all their bloom at once, while some herbaceous plants have a succession of flowers, as we said of basil; wherefore it is in flower for a long period, as are many other herbs, such as heliotropion and chicory.

[9.4] There are also many differences in the roots, and, in a way, the

differences in these are more obvious; some are woody, some fleshy and fibrous, just as in the cultivated kinds, as are those of corn and most kinds of grass. Again the roots themselves exhibit in each case very many differences in colour smell taste and size; some are white, some black, some red, as those of alkanet and madder; some are yellowish, or the colour of wood. Again there are roots which are sweet, bitter, pungent, fragrant, evil-smelling; and some are medicinal, as has been said elsewhere.

[9.5] There are also differences between those with fleshy roots; the roots of some are round, of some oblong and acorn-shaped, as those of asphodel and crocus; some consist of several layers, as those of purse-tassels squill and others which belong to that class, onion long onion and others like these. Some are smooth loose and soft throughout, and, as it were, without 'bark,' as those of cuckoo-pint, while some have a 'bark' attached to the fleshy part, as those of cyclamen and turnip. And not all those that are fragrant or sweet or pleasant to the taste are also edible, any more than all those that are bitter are uneatable; any (whether sweet or bitter) that are harmless to the body after being eaten are edible; for some that are sweet are deadly and dangerous to health, while some are beneficial even if they are bitter or have an evil smell. The same may be said of the leaves and stalks, as in the case of wormwood and centaury. There are also differences in the time of growth and of flowering, the season being variously the beginning or middle of winter, or again spring, summer, or autumn. So too is there in like manner a difference in the fruits, which in some of these plants are edible and juicy, as well as the leaves seeds and roots. And in these cases there are further differences in the taste (of those which are edible and juicy), which may be sharp, pungent, sweet, dry, or exhibit other similar differences, either altogether or in degree. These are examples of the differences which we find.

[10.1] Each plant having its proper season for growth, flowering and maturing of the fruit, nothing grows before its proper season either of those grown from a root or of those grown from seed, but each awaits its proper season and is not affected even by rain. For some are plants which belong properly to summer as to their growth and their flowering, as golden thistle and squirting cucumber, as was said of shrubby plants and of konyza caper and the rest; for of these too none blooms or grows before its proper season. Wherefore in this respect too these plants would seem to differ from trees. For

trees make their growth all at once or nearly so, or at all events we may say that they do so all at one season; but the plants of which we are now speaking have their times of growing and still more of flowering at many or rather at all seasons; so that, if one will consider it, both the growing and the flowering are almost continuous throughout the year; for one continually succeeds to another, so that all seasons are covered; thus after the dandelion will come the crocus anemone groundsel and the other plants of winter, and after these those of spring summer and autumn. Some again, as was said, because they do not produce all their bloom at once, cover a longer season; for there are some that thus bloom, for instance dandelion bugloss chicory plantain, and others; but because of this continuity and overlapping it does not seem easy in some cases to define which first make growth and which are late in growing, unless one were to lay down that the 'year' begins when a certain season begins. Further in these plants it is not easy to define in each case the time of first growth and the season when, the fruits being matured, it makes a fresh start in reproduction. This seems chiefly to occur after the autumnal equinox; for by that time most of the seeds are matured, like most of the fruits of trees: moreover a change then takes place in the seed itself as well as in the season. But in the case of any seeds which are still immature and unripe and so are overtaken by winter, the period of first growth, the flowering of the new plant, and the period of maturity are proportionally later. Wherefore it comes to pass that some bloom at the solstice, some at the rising of the dog-star, and some after the rising of Arcturus and the autumnal equinox.

[10.2] But these matters seem to require a wider investigation in order to determine when the process begins. However it is clear from what has been said that these plants present at least as many differences as trees. For some again of this class are evergreen, as hulwort heliotropion and maidenhair.

[10.3] Of the classes into which herbaceous plants may be divided, as those having a spike and chicory-like plants.

[11.1] Having then made these explanations we must now give a separate account of each plant, discussing the differences (in those plants in which they occur) and saying how they arise . . . except those peculiarities which belong to the character of individual kinds. I mean for instance the plants which have a spike, those which may be classed with wild chervil, and those which have a single stem, or any other such class in which one can find some such

general characteristics obvious to the senses either in leaves flowers roots or fruits; (for the classification is to be made by the visible parts, as well as by the roots).

[11.2] An example of the plants which have a spike is the plant which some call (dog's eye ' (rib-grass), which comprises several forms; we have also foxbrush,' stelephuros (plantain) which some call (lamb's tongue 'and some'quail-plant ' ; and somewhat similar to this is thryallis. These are simple plants and uniform in character, having a spike which is not pointed nor bearded; while in 'fox-brush' it is soft and somewhat downy, in that it actually resembles the brush of a fox, whence also it has obtained its name. Similar to this is stelephuros (plantain), except that it does not, like that plant, flower here and there, but all up the spike like wheat. The bloom of both is downy like that of corn, and the plants in their general appearance resemble wheat, but have broader leaves. Of the other plants which have a spike a similar account may be given.

[11.3] The chicory-like plants all have annual leaves and have root-leaves, and they begin to grow after the Pleiad, except dandelion; but in their stems and roots they exhibit great differences; for in some these are simpler and fewer, but the stem of chicory is large and has many side-shoots; also it is tough and hard to break, wherefore it is used for withes; it makes side-growths from the root, and also has long roots, wherefore it is hard to kill; for, when the top is taken off to use as a vegetable, what remains starts growing again. Moreover different parts of it flower at different times, and the flowering goes on till autumn, since the stem appears to be hard. Also it bears a pod, which contains the seed, at the top of the stem.

[11.4] Cat's ear is smoother and has a more cultivated appearance, and is also sweeter and not like khondrylla; for the latter is altogether uneatable and unfit for food, and its root contains a quantity of pungent juice.

[11.5] Dandelion is also unfit for food and bitter: it flowers early and quickly waxes old and the flower turns to pappus; but then another flower forms, and yet another, and this goes on right through the winter and spring up to the summer; and the flower is yellow.

[11.6] The like may be said of pikris: for this plant too blooms in spring, and like dandelion it flowers throughout the winter, and it flowers also to some extent in summer; in taste it is bitter, whence its name. These are the special

points of difference about these plants; now we must endeavour, as was said/ to set forth the special points of the other classes in like manner.

[12.1] There is a large class of these which have fleshy or bulbous roots: these exhibit differences both as compared with other plants and with one another both in roots leaves stems and their other prominent features. Of the roots, as has been said already, some are in layers, some fleshy, some have a 'bark,' some not; and again some are round, some oblong, some edible and some not fit for food. Among edible roots are not only purse-tassels and others which resemble them, but also the roots of asphodel and squill, though not of all kinds of the latter, but only of the kind called 'Epimenides' squill (French sparrow-grass) which gets its name from its use; this kind has narrower leaves and is smoother than the others.

[12.2] The root of cuckoo-pint is also edible, and so are the leaves, if they are first boiled down in vinegar; they are sweet, and are good for fractures. To increase the root, having first stripped off the leaves (and the leaf is very large), they dig it up and invert it in order that it may not shoot, but may draw all the nourishment into itself. This some do also with purse-tassels, when they lay them by. However the root of edder-wort (for a kind of cuckoo-pint is so called because of its variegated stem) is not good for food, but is used for drugs.

[12.3] But the root of the plant called corn-flag is sweet, and, if cooked and pounded up and mixed with the flour, makes the bread sweet and wholesome. It is round and without 'bark,' and has small offsets like the long onion. Many of them are found in moles' runs; for this animal likes them and collects them.

[12.4] The root of theseion is bitter to the taste, but when pounded purges the bowels. There are also certain others of these roots which have medicinal properties, but of many the roots are neither medicinal nor edible. Such are the differences in the roots.

[13.1] In the leaves the differences are in size and shape. Asphodel has a long leaf, which is somewhat narrow and tough, while that of squill is broad and tears easily; corn-flag, which is called by some xiphos ('sword'), has a sword-like leaf, whence its name, and iris one more like a reed. That of cuckoopint, in addition to being broad, is concave and like that of cucumber; that of the narcissus is narrow substantial and glossy, those of purse-tassels and plants of that character are quite narrow, and that of crocus narrower still.

[13.2] Some have not a stem at all, nor a flower, as the edible cuckoo-pint; some have only the flower-stem, as narcissus and crocus; some however have a stem, as squill purse-tassels iris and corn-flag; but asphodel has the tallest of all for the antherikos (asphodelstalk) is very tall: that of iris is smaller, but tougher, though in general it is like the asphodel-stalk. Asphodel also produces much fruit, and its fruit is woody: in shape it is triangular and in colour black; it is found in the round vessel which is below the flower, and it falls out in summer when this splits open. It does not produce all its flowers at once; in which respect it resembles squill, but the flowering begins at the bottom. In the stalk of asphodel forms a grub which changes into another creature like a hornet, and then, when the stem withers, eats its way out and flies away. A peculiarity of the plant as compared with others which have a smooth stem appears to be that, though it is slender, it has outgrowths at the top. It provides many things useful for food: the stalk is edible when fried, the seed when roasted, and above all the root when cut up with figs; in fact, as Hesiod says, the plant is extremely profitable.

[13.3] Now all bulbous plants are tenacious of life, but especially squill; for this even lives when hung up and continues to do so for a very long time; it is even able to keep other things that are stored, for instance the pomegranate, if the stalk of the fruit is set in it; and some cuttings strike more quickly if set in it; and it is said that, if planted before the entrance door of a house, it wards off mischief which threatens it. All these bulbs grow in masses, as do onions and garlic; for they make offsets from the root, and some plainly are also increased by seed, as the asphodel polyanthus narcissus corn-flag and purse-tassels.

[13.4] However it is said to be a peculiarity of pursetassels that all the seeds do not germinate at once, but some in the same year, some the next year; a like account is given of aigilops and trefoil. If then this is true, it is not peculiar to this plant. Nor perhaps is the following characteristic, which is not found in many plants and is marvellous wherever it does occur and it is found in squill and narcissus: namely that, whereas in most plants, whether those originally planted or those which are produced from them in season, the leaf comes up first and then presently the stem, in these plants the stem comes up first.

[13.5] In the case of narcissus it is only the flower-stem which comes up, and

it immediately pushes up the flower. But in squill it is the stem proper which thus appears, and presently the flower appears emerging from and sitting on it. And it makes three flowerings, of which the first appears to mark the first seed-time, the second the middle one, and the third the last one; for, according as these flowerings have occurred, so the crops usually turn out. But, when the flower-stem has waxed old, then the growth of the leaves follows many days later. So also is it with narcissus, except that it has no second stem besides the flower-stem, as we said, nor any visible fruit; but the flower itself perishes with the stem, and when it has withered, then the plant puts up its leaves.

[13.6] These two plants then, as compared with the other bulbous plants are peculiar; and, as compared with those which bloom before the leaves and stems appear (as the autumn squill seems to do, and other plants with conspicuous flowers, as well as, among trees, the almond especially, if not alone), there is the distinction that, while these two put forth their leaves along with the flowers or immediately afterwards (so that about some the matter is uncertain) in the case of these two the flower appears, as it were, from a different starting-point, there being a considerable number of days in between, and the growth of the leaves not beginning till, in the case of one of them, the flower, and in the case of the other, the whole stem has withered. Squill produces its leaves before the flower, narcissus afterwards; but the latter produces much more abundant foliage, and the individual root is small rather than large, resembling purse-tassels in shape, except that it is not formed of scales. About these matters then there is doubt.

[13.7] Of purse-tassels it is plain that there are several kinds; for they differ in size colour shape and taste. In some places they are so sweet as to be eaten raw, as in the Tauric Chersonese. But the greatest and most distinct difference is shown by the 'wool-bearing' purse-tassels; for there is such a kind, and it grows on the sea-shore, and has the wool beneath the outer tunic, so that it is between the edible inside and the outside: of it are woven felt shoes and other articles of apparel. Wherefore this kind is woolly and distinct from the Indian kind, which is hairy.

[13.8] There are also several kinds of plants of the same class as purse-tassels . . . such as snowdrop, starflower, opition, kyix, and to a certain extent Barbary nut. These belong to this class only in having round roots; for in colour they are white, and the bulbs are not formed of scales. A peculiarity of

Barbary nut is that the lower end of the root grows first, and this is called; it grows during winter, but, when spring appears, it decreases, while the upper part, which is edible, grows, Such are the differences in these plants.

[14.1] There are also the' following peculiarities in herbaceous plants, for instance that which we find in wet-proof (maidenhair); the leaf does not even get wet when it is watered, nor does it catch the dew, because the dew does not rest on it; whence its name. There are two kinds, the white 'wet-proof' (English maidenhair), and the black (maidenhair); and both are useful to prevent the falling off of the hair of the head, for which purpose they are pounded up and mixed with olive-oil. They grow especially in damp places. Some think that trikhomanes (English maidenhair) is also useful in cases of strangury. Its stem is like that of the black kind, but it has small leaves, which are close set and grow in opposite pairs; there is no root below, and the plant loves shady places.

[14.2] Of those plants which do not flower all at once anthemon has the peculiarity that, while in all others the lower part flowers first, in this plant it is the upper part which does so; the outer circle of the flower is white, and the centre green; and the fruit falls off, as in spinous plants, leaving the attachment bare. There are several forms of it.

[14.3] Bedstraw has the peculiarity that it sticks to clothes owing to its roughness, and it is hard to pull away; indeed it is in this rough part that the flower is contained: it does not project nor show, but matures within itself and produces seed; so that its habit is like that of weasels and sharks; for, as these animals likewise produce eggs in themselves and then bear their young alive, so this plant keeps its flower within itself, matures it and produces fruit.

[15.1] As to these plants whose flowering time is dependent on the heavenly bodies, as the plant called heliotropion, golden thistle (for this also blooms at the solstice), and also 'swallow-plant' (greater celandine) for this blooms when the Swallow-wind blows the reason in these cases would seem to be partly in their nature and partly accidental.

[15.2] Such peculiarities are common in other plants also; thus it is the nature of the house-leek to remain always moist and green, its leaf being fleshy smooth and oblong. It grows on flat shores, on the earthy tops of walls, and especially on tiled roofs, when there is on them a sandy accumulation of earth.

[15.3] Possibly one might mention many other eccentricities. But, as has been

repeatedly said, we must only observe the peculiarities and differences which one plant has as compared with others. Some plants are found in several forms which have almost the same name, for instance the lotos; for of this there are many forms differing in leaves stems flowers and fruit, including the plant called melilotos; there are also forms differing in the virtues for which they are used as food, and again in their fondness for different localities. So too is it with many other plants.

[15.4] Others are found in fewer forms, as strykhnos, which is a general name covering plants that are quite distinct; one is edible and like a cultivated plant, having a berry-like fruit, and there are two others, of which the one is said to induce sleep, the other to cause madness, or, if it is administered in a larger dose, death. The same thing may be observed in other plants which are widely different. Now about the other herbaceous plants enough has been said; but concerning corn and corn-like plants we must speak next; for this subject still lies before us.

BOOK VIII. OF HERBACEOUS PLANTS: CEREALS, PULSES, AND SUMMER CROPS.

[1.1] Let the above suffice for an account of the other herbaceous plants; let us now discuss corn and corn-like plants in the same manner as those already treated; for this class of herbaceous plants we reserved.

[1.2] There are two principal classes; there are the corn-like plants such as wheat, barley, one-seeded wheat, rice-wheat, and the others which resemble either of the first two; and again there are the leguminous plants, as bean, chick-pea, pea, and in general those to which the name of pulses is given. Besides these there is a third class, which includes millet, Italian millet, sesame, and in general the plants which belong to the summer seed-time, which lack any common designation.

[1.3] There is only one single way of propagating these; they grow from seed, except that some may grow rarely and scantily from a root. There are two seasons for sowing most of them; the first and most important is about the setting of the Pleiad; this rule we find even Hesiod following with most authorities; wherefore some call it simply 'the seed-time.' Another time is at the beginning of spring after the winter equinox. However different crops are sown at the two seasons. For some of them love to be sown early, some late because they cannot bear the winters, while some will do not amiss at either season, both towards winter and towards spring.

[1.4] Crops sown early are wheat and barley, and of these the latter is sown the earlier; also rice-wheat one-seeded wheat olyra, and others which resemble wheat. For all of these the time of sowing is about the same. Of leguminous plants bean and okhros? it may be said, are specially sown at this time; for these on account of their weakness like to be well rooted before the winter. Lupin is also sown early; in fact they say it should be sown straight from the threshing-floor.

[1.5] Those which are sown late are certain special varieties of these very kinds, as a certain kind of wheat, and of barley the kind which is called 'three months barley' because it takes that time to mature; and among leguminous plants lentil tare pea. However some of these plants are sown at both seasons, as vetch and chick-pea; some also sow beans late, if they have missed the first seed-time. To speak generally, some crops are sown early because of their

robustness, since they can stand the winters, some because of their weakness, so that their growth may be secured in the fine weather. These then are the two seasons; the third is that of the summer crops of which we spoke, which are sown millet Italian millet sesame, and also erysimon and horminon. Such then are the times for each.

[1.6] Some are quicker in coming up, some slower. Barley and wheat generally come up on the seventh day, but barley is the earlier. Pulses take four or five days, except beans; for they, like some kinds of corn, require a longer time; in some places they take as much as fifteen days, or even twenty. This crop indeed is the slowest to start of all, and if after the sowing there is a long spell of wet weather, it is extremely slow. Whether the sprouting of crops sown at the spring seed-time is quicker because of the season is matter for enquiry.

[1.7] These times of sprouting or germination must be taken generally; for at some times and places germination takes fewer days, as with barley in Egypt, where it is said to come up on the third or fourth day; while elsewhere it takes longer than the period mentioned, which is not surprising when both soil and climate are different, when one makes the sowing earlier or later, and when the crop is subjected to different influences afterwards. For open light soil with a favourable climate produces quick and easy growth, while soil that is sticky and heavy tends to slow growth, and that of a specially dry district to slower growth still.

[1.8] Moreover the time of growth is affected, according as storms supervene, or droughts, or fine weather or again rain; for these conditions make wide differences. So too it makes a difference if the ground has been well tilled and given dung, or if neither of these things has been done: for the soil makes a difference even as to the early or late germination of each crop. In Hellas some are used to sow everything earlier because of the coldness of the soil, for instance the Phocians; the object being that the winter may not overtake the crop while it is still tender.

[2.1] In germinating some of these plants produce their root and their leaves from the same point, some separately, from either end of the seed. Wheat barley one-seeded wheat, and in general all the cereals produce them from either end, in a manner corresponding to the position of the seed in the ear, the root growing from the stout lower part, the shoot from the upper part; but

the part corresponding to the root and that corresponding to the stem form a single continuous whole. Beans and other leguminous plants do riot grow in the same manner, but they produce the root and the stem from the same point, namely the point at which the seed is attached to the pod, which, it is plain, is a sort of starting point of fresh growth. In some cases there is also a formation resembling the penis, as in beans chick-peas and especially in lupins; from this the root grows downwards, the leaf and the stem upwards.

[2.2] There are then these different ways of germinating; but a point in which all these plants agree is that they all send out their roots at the place where the seed is attached to the pod or ear, whereas the contrary is the case with the seeds of certain trees, as almond hazel acorn and the like. And in all these plants the root begins to grow a little before the stem; whereas in certain trees the bud first begins to grow within the seed itself, and, as it increases in size, the seeds split for all such seeds are in a manner in two halves, and those of leguminous plants again all plainly have two valves and are double and then the root is immediately thrust out; but in cereals, since the seeds are in one piece, this does not occur, but the root grows a little before the bud.

[2.3] Barley and wheat come up with a single leaf, but peas beans and chick-peas with several. All the leguminous plants have a single woody root, and also slender side-roots springing from this. The chick-pea is about the deepest rooting of these, and sometimes it has side-roots; but wheat barley and the other cereals have a number of fine roots, wherefore they are matted together. Again all such plants have many branches and many stems. And there is a sort of contrast between these two classes; the leguminous plants, which have a single root, have many side-growths above from the stem all except beans; while the cereals, which have many roots, send up many shoots, but these have no side-shoots except such sorts of wheat as are called sitanias and krithanias (‘barley-wheat’).

[2.4] During winter cereals remain in the blade, but, as the season begins to smile, they send up a stem from the midst and it becomes jointed. And it comes to pass that the ear also at once appears in the third, or in some cases in the fourth joint, though it is not distinctly seen in the mass of growth (the whole stem contains more joints than three or four), so that it must be formed at the same time that the straw grows or but a little later; though it does not become conspicuous till it has first swollen and formed in the sheath, and by

that time its size makes its development visible.

[2.5] Four or five days after being set free wheat and barley flower and remain in bloom for a like number of days; those who put the period at the longest say that the bloom is shed in seven days. On the other hand the flowering period of leguminous plants lasts a long time; that of vetch and chick-pea is longer than that of most, but that of the bean is far longer than that of any of them; they say that it is in bloom for forty days; some however give this period absolutely, others say that at different times different parts are in flower, since the whole plant does not flower at once. For plants with an ear bloom all at once, but plants with pods and all leguminous plants bloom part at a time; the lower part blooms first, and, when this bloom has fallen, the part next above it, and so on up to the top. Wherefore, at the time when some of the vetches are gathered, the lower seeds have already fallen, while the upper ones are still quite green.

[2.6] After the flowering is over wheat and barley develop and mature in about forty days; one-seeded wheat and other such plants take about the same time. So too, they say, does the bean, which blooms and matures in a like number of days: but the others take fewer, and fewest of all the chick-pea, since, as some say, it takes only forty days from the time when it is sown to that when it is mature; and in any case it is clear that the plant as a whole develops very rapidly. Millet sesame Italian millet and the summer crops in general, it is fairly well agreed, take the same number of days, that is, forty; though some say that they take less.

[2.7] Again as to the development of the plant there are differences according to soil and climate. Some soils seem to produce the crop in fewer days; for instance, Egypt may be given as a specially conspicuous example; in that country barley is reaped in six months and wheat in seven: while in Hellas the barley harvest is in the seventh month, or in most parts in the eighth, and wheat requires an even longer time. However even in Egypt the whole harvest is not gathered at such an early date, but only what is required for the first-fruits; for they gather new grain for the meal required in certain sacrifices in the sixth month, and that too in the regions high up the Nile, above Memphis.

[2.8] It is said also that in the Messenian district in Sicily at the place called Mylae the late sown crops mature rapidly; thus the sowing of pulses goes on

for six months, but he that made the last sowing gathers his crop at the same time as the first: also that the soil is exceedingly good, so that it yields thirty-fold; and there are also wonderful pastures and forest-land. They tell of an even more wonderful thing in Melos; there they reap thirty or forty days after sowing; wherefore it is a saying of the islanders that one should continue sowing till one sees a swathe. However it is said that pulses in their country do not grow like this, nor are they abundant. Yet they say that the soil is wonderfully productive; for it is good both for corn and olives, and fairly good for vines.

[2.9] However what occurs in Chalkia, an island belonging to the Rhodians, goes even beyond this and is more extraordinary than all the instances given; there they say that there is a place which is so early and so fertile that, when the barley is sown after reaping the crop with the other crops, they then sow again, and then reap the crop thus sown at the same time as the remaining crops; this then, if it be true, marks a difference greater than we find anywhere else. For it is less surprising that there should be a difference in crops transferred to another region, as they say occurs when they are transferred from Cilicia to Cappadocia or in general beyond the Taurus; for these regions are obviously very dissimilar. But that one particular land should produce two crops in the time that other lands to which it is close take to produce one, is very remarkable; wherefore Chalkia exhibits the greatest difference.

[2.10] The crops grown in other regions show not much, if any, dissimilarity as to time; those grown at Athens are only about thirty days or not much more before those of the Hellespont region. Now, if the sowing should turn out to be also earlier, that would shift the season back; if it is at the same time, it is plain that the difference of time would be greater.

[2.11] Again the particular district makes a considerable difference, even as between places which are not far apart; thus the crops of Salamis are far earlier than those of the rest of Attica, and so in general are those of places by the sea; and this applies to other fruits as well as these: for instance, those of the place called Akte in the Peloponnese and of Phalykos in the Megarid are early; but here something is contributed by the fact that the soil is light and crumbling. Such are the facts in regard to growth and development.

[3.1] There are also differences between the whole classes which we have mentioned, namely cereals leguminous plants and summer crops, as well as

between the several members of the same class. Cereals have the leaf of a reed, while of leguminous plants some have a round leaf, as beans and most others, some a more oblong leaf, as pea, lathyros okhros and the like. Some again have fibrous leaves, others leaves without veins and fibres. Again sesame and erysimon have leaves quite distinct from these.

[3.2] Again the stem of cereals is jointed and hollow; wherefore it is called the 'reed,' while that of the bean is hollow, and that of the other leguminous plants is more woody, that of chick-pea woodiest of all; of the summer crops that of millet and Italian millet is reed-like, that of sesame and erysimon is more like the stem of ferula. Some again have erect stems, as wheat barley and in general the cereals and summer crops; some have rather a crooked stem, as chick-pea vetch lentil; some a creeping stem as okhros pea lathyros; while calavance, if long stakes are set by it, climbs them and becomes fruitful, whereas otherwise the plant is unhealthy and liable to rust; the bean, most of all leguminous plants, if not alone among them, has an erect stem.

[3.3] The flowers also shew differences in character and in position (of which matters we have to some extent treated in our general account); thus some are 'downy,' as those of corn and of any plant that has an 'ear'; others are 'leafy,' as those of leguminous plants, and in most cases they are irregular flowers; for most of these have such flowers. Those of millet and Italian millet are also 'downy' those of sesame and erysimon 'leafy.' Another difference is that in some cases the flowers are round the fruit; thus those of corn and millet are round the ear; while in leguminous plants the fruit comes as it were from the flower itself, or at least from the same starting-point. Another difference is that some produce all their flowers at once, others in succession. And there are other differences akin to these.

[3.4] In like manner there are differences in the fruits; some have an 'ear', leguminous plants a pod, and millet-like plants a 'plume' which is the name given to an inflorescence such as reeds have. Again, generally speaking, some have their seeds in a vessel, some in pods, some naked; and further some bear their fruit at the top, some at the sides; and there are other differences which bear on this enquiry.

[3.5] In general the leguminous plants produce more fruit and are more prolific, and the summer crops millet and sesame are even more so than these, while among the leguminous plants themselves lentil is the most prolific.

Generally speaking, those that have small seeds are more prolific, as cummin among pot-herbs, which are all prolific of seed. The seeds of cereals are more robust as to standing winter and conditions of climate generally, while those of leguminous plants are stronger as to providing food. However it may be that in this respect the other animals are affected in the opposite way to men.

[4.1] There are then these differences between the various classes; and as between plants of the same class there are plainly differences due to the unlikeness in the various parts. Thus among cereals wheat as compared with barley has a narrower leaf, and a smoother stem of closer texture tougher and less brittle. Again the seed of wheat has several coats/ that of barley is naked, that plant having its seeds specially naked. Also one-seeded wheat rice-wheat and all such plants have their seed in several coats, and above all, it may be said, is this true of oats. Also the 'reed' of wheat is taller than that of barley, and wheat has its ear less distant from the 'leaf.'

[4.2] Further the husk of wheat is distinct from that of barley, being less dry and softer. Barley also differs from wheat in this respect; it has grains in a regular row, whereas those of wheat are not in a row, but the ear is as it were quite simple in form.

[4.3] Such then are the differences as between one whole kind and another. But in each of these kinds again, for instance in barley and wheat, there are many sub-divisions differing both in the actual fruits, in the ear, and in the other characteristic features; and again in capacities and properties. Of barley different sorts have respectively two, three, four, and five rows of seeds; the largest number known is six, for there is a kind which bears that number. And those which have more rows have generally the grains set closer together. Another great difference is that of having side-shoots, as we said of the Indian kind. Again in barley the ears are in some kinds large and of looser make, in some smaller and set closer; in some kinds the ear is some way from the 'leaf,' in some it is nearer to it, as in the kind called 'Achilleian.' Again of the grains themselves some are rounder and smaller, some more oblong and larger and set at wider intervals on the ear. Moreover some are white, some black or reddish, and the latter are thought to produce much meal and to be more robust than the white as to bearing winter wind or conditions of climate generally.

[4.4] There are also many kinds of wheat which take their names simply

from the places where they grow, as Libyan Pontic Thracian Assyrian Egyptian Sicilian. They show differences in colour size form and individual character, and also as regards their capacities in general and especially their value as food. Some again get their distinctive names for other reasons, as *kankhrydias stlengys* 'Alexandrian'; all of which must be distinguished by the above-mentioned characters. Again, if one takes such differences as the following, they are quite characteristic thus some are early, some late, some are vigorous and prolific, some are small and produce little, some have a large, some a small ear. The ears of some remain a long time in the sheath, of some it remains but a short time, as that of the Libyan kind. Again some have a slender, some a stout haulm; the Libyan kind has this characteristic also, and that of *kankhrydias* is also stout. Again the grain of some has few coats, of some many, for instance the Thracian. Some kinds have a single reed,' some more than one, and in the latter class the number varies.

[4.5] So too must we distinguish any differences like these or those mentioned above which are found in the several capacities; for these would seem to be the most essential differences. In this connexion we may distinguish kinds which mature in three or in two months, and those, if there be such, which take a less number of days; for instance, they say that in the region of Aineia there is a kind which ripens and attains perfection within forty days from the time of sowing; they say too that this grain is strong and heavy, not light like that which takes three months; wherefore they give it even to the servants, for it also does not contain much bran. Now this kind is the rarest and the quickest to mature. But there is also a kind which takes two months; this was brought to Achaia from Sicily; it is not however prolific nor fertile, though as food it is light and sweet. There is another such kind which grows in Euboea and especially in the region of Karystos. There are several kinds that take three months, and these, wherever they are found, are light and not prolific; their growth consists of a single 'reed,' and in general they are not robust. Lightest of all we may say is the Politic wheat; the Sicilian is heavier than most of those imported into Hellas, but heavier still than this is the Boeotian; in proof of which it is said that the athletes in Boeotia consume scarcely three pints, while, when they come to Athens, they easily manage five. The Laconian kind is also light. The reason for these differences is to be found in the respective soils and in the climate; for in Asia not far from Bactra

they say that in a certain place the corn is so vigorous that the grains grow as large as an olive-stone, while in the country called that of the Pissatoi it is so strong that, if a man eats too much of it, he bursts, which was actually the fate of many of the Macedonians. There is one curious thing about the corn of Pontus, which is an exception to the rule as to the lightness of crops raised in three months; for there the hard crops are those of the spring, the soft ones those of the winter; for soft kinds are exceedingly light. Two sowings, as it appears, are made of all corn alike, one in winter and one in spring, at which time they also plant the seed of the pulses.

[4.6] Some kinds are free from darnel, as the Pontic and the Egyptian; the Sicilian is also fairly free from it, and that of Akragas is especially immune from darnel.

[4.7] Peculiar however to the Sicilian is the plant called melampyron? which is harmless and not, like the darnel, injurious and productive of headache. However such peculiarities, as was said, must be ascribed to the soil, and to a certain extent to the different characters of different kinds.

[5.1] In pulses we cannot find such differences to the same extent, whether for the want of equally careful enquiry or because there is actually less diversity in these plants. For, apart from chickpea lentil and to a certain extent bean and vetch (in so far as in these we find differences of colour and taste), among the rest no distinct forms are recognised. Chick-peas however differ in size colour taste and shape; thus there are the varieties called 'rams,' 'vetch-like' chick-peas and the intermediate forms. In all pulses the white are the sweeter, and this applies to vetch lentil chick-pea bean and sesame, of which also there is a white form.

[5.2] However it is more possible to recognise the differences in such points as these: all these plants have pods, but whereas the pods in some kinds have no divisions, but the seeds as it were touch one another, as in vetch pea and most kinds, in some there are divisions, as in lupin and still more in sesame, in which the divisions are of a peculiar kind. Again some have long, some round pods, as chick-pea. And the number of seeds follows in proportion, since they are fewer in the small pods, as in those of chick-pea and lentil.

[5.3] Possibly these differences correspond to those which we mentioned in the case of cereals as to the ears and the actual fruits; for what are called 'pods' also fairly correspond to the shape of the seeds, some being flat, as

those of lentil and tare, some more or less cylindrical, as those of vetch and pea: for in the case of either pair of plants the seeds correspond in shape. However one might discover and distinguish many such differences, of which some are common to a whole kind, others special to particular varieties.

[5.4] In all cases the seeds are attached to the pods and have a sort of starting-point, which in some cases projects, as in bean and chick-pea, in some is hollow, as in lupin and some others, and in some is not thus conspicuous but smaller and, as it were, only indicated; this is plain from observation; it is from this point that the seeds germinate and take root when they are sown, as was said: but to start with they are themselves nourished by being so attached to the pod until they are matured. This is clear both from what is said now and from what was said before. Enough then about the points of difference.

[6.1] It is expedient to sow all these, if possible, at the early seed-time; however some plant the seed even in dry ground, and especially wheat and barley, on the theory that they are most likely to hold their own at a time when the ground is not infested with birds or other creatures. For it appears that in general the first sowing is better, and worst that which is made in half-soaked ground; for then the seeds perish and become 'milky'; moreover many weeds come up at that time. After the sowing however it is beneficial for all that rain should fall on them, except in the case of some which appear to germinate then with more difficulty, as seems to be the case with beans, and among summer crops with sesame cummin and cress.

[6.2] As to sowing thickly or scantily one should have regard to the soil as well as to other considerations; for a fat good soil can bear more than one which is sandy and light. However there is a saying that the same soil can take at one time more, at another less seed; and in general the former condition is taken as an unfavourable omen, for then they say at once that the soil is hungry; however this is perhaps a rather foolish saying. If a man should have regard to the kind of the seed and especially to the actual situation, considering the aspect in respect of winds and sun, as well as the soil itself, he would more properly gauge the differences.

[6.3] Similarly manuring for the sown crops should be done with regard to the soil; and it is better to turn up fallow land in winter than in spring. And there are some places in which deep ploughing is not expedient, as in Syria;

wherefore they use small plough-shares. In other parts to work the ground too much is injurious, as in Sicily: wherefore many settlers in the country, it appears, make a mistake. From every point of view therefore the soil must be considered.

[6.4] The seeds are also classified according as each suits a particular soil; in wintry lands wheat is sown rather than barley, and in general they say that corn rather than leguminous plants should be sown in barren soils which are only disturbed at long intervals; and such soils bear wheat better than barley. Moreover wheat welcomes abundant rain more than barley, and bears better on land which is not manured. In like manner they distinguish among wheats themselves which suits which kind of soil, namely which grows best in good fat soil and which in crumbling light soil, and so on with other kinds of soil.

[6.5] More abundant rain is beneficial to all crops when they have come into leaf and formed the flower; however it is harmful to wheats and barleys and other cereals when they are actually in flower; for it destroys the flower. But to pulses it is harmless, except to chick-peas; for these, if the salt is washed off them, perish from rot or from being eaten by caterpillars. However the black and the red chick-pea are stronger than the white, and it is beneficial, they say, to sow this crop late in moist soil. The bean likes especially to receive rain when it is in flower; wherefore men are unwilling, as we said, to sow it late, because it flowers for a long time; but after it has shed its flowers, it needs very little water, since its time of maturity is now near. But, when cereals have matured, it appears that water actually injures them, and barley more than wheat.

[6.6] In Egypt Babylon and Bactra, where the country receives no rain, or but little, the dews are sufficient nourishment; and so is it also in the regions about Cyrene and the Euesperides. However to all, generally speaking, it is the spring rains which are the most seasonable; and that is why Sicily is rich in corn; for there is abundance of soft rain in spring and little of it in winter. A light soil requires plenty of rain, but little at a time; while that which is fat can indeed bear both an abundance of rain and a drought; (for a droughty country seawinds and breezes seem to be helpful, and various breezes of this kind prevail in various countries, as has been said already). Yet in general drought suits corn better than excessive rain; for heavy showers, apart from the harm which they do in other ways, often actually destroy the seed, or at least cause

a luxuriant growth of leafage, so that the grain is choked and becomes abortive.

[7.1] Now, while it is not the nature of any other of these seeds to degenerate and change into something else, they say that wheat and barley change into darnel, and especially wheat; and that this occurs with heavy rains and especially in well-watered and rainy districts. But that darnel is not a plant of the spring, like other weeds (for some endeavour to make this out) is clear from the following consideration: it springs up and becomes noticeable directly winter comes; and it is distinguished in many ways; the foliage is narrow abundant and glossy, and this gloss is the most marked of these differences; (the leaves of aigilops are indeed also abundant, but this character does not shew itself in them till spring). This then is peculiar to the seeds of wheat and barley, and also to those of flax; for that too, they say, turns into darnel.

[7.2] A peculiarity of chick-pea as compared with other leguminous plants is that which has been mentioned as to its flowering; and also the fact that it is the quickest to mature its fruit, being very strong and woody; and again there is the fact that in general it does not reinvigorate the ground, since it exhausts it; but it destroys weeds, and above all and soonest caltrop. And in general it is not every kind of soil which suits it; the soil should be black and fat. Of the other leguminous plants the bean best reinvigorates the ground, even if it is sown thick and produces much fruit.

[7.3] All those crops sown at the summer seed-time need little water, and they say also that spring water is better for them than rain water; and Italian millet and millet need less water, for, if they have too much, they shed their leaves. Millet is the robuster plant, Italian millet is sweeter and less robust. Sesame and lupin are not eaten green by any animal; whether the same is true of erysimon and horminon is matter for enquiry; for these too are bitter. Erysimon is like sesame and is oily; horminon is like cummin and black, and is sown at the same time as sesame. These matters then require investigation.

[7.4] In good soils to prevent the crop running wildly to leaf they graze and cut down the young corn, for instance in Thessaly. And the result is that, however often they graze it, the crop is not impaired; while if they cut it down not more than once, the wheat changes in character and becomes tall and weak what they call long-shafted corn, and, if seed of this is sown, it does not

recover its character. This the Thessalians tell of as having occurred in a few cases. At Babylon however they cut it down twice always and as it were systematically, and after that they let the sheep on to it; for in that case it makes its straw, but otherwise it runs wildly to leaf; and, if the ground is ill cultivated, it produces fifty fold, if it is carefully cultivated, a hundred fold. And the 'cultivation' consists in letting the water lie on it as long as possible, so that it may make much silt; for the soil being fat and close must be made open. And at Babylon the ground does not produce weeds and grasses, as it does in Egypt. Such are the things which depend on the quality of the soil.

[7.5] Wheat and barley also in many places grow from the root in the next year, or in the same year from crops cut down for fodder, since a second haulm shoots up. The like happens also if the plant has been nipped by winter; for it shoots again when rain comes; but such plants produce an ear which is imperfect and under-sized. There is also new growth the next year from plants which are roughly treated or trodden down so that hardly anything remains visible, as happens when an army has marched over the field; the ears in such cases too are undersized and are called 'lambs.' But no kind of leguminous plant can do anything of the kind, or at least not to the same extent. In these various ways may new growth occur.

[7.6] For growth and nourishment the climate is the most important factor, and in general the character of the season as a whole; for when rain, fair weather and storms occur opportunely, all crops bear well and are fruitful, even if they be in soil which is impregnated with salt or poor. Wherefore there is an apt proverbial saying that it is the year which bears and not the field.

[7.7] But the soil also makes much difference, according as it is fat or light, well watered or parched, and it also makes quite as much difference what sort of air and of winds prevails in that region; for some soils, though light and poor, produce a good crop because the land has a fair aspect in regard to sea breezes. But, as has been repeatedly said already, the same breeze has not this effect in all places; some places are suited by a west, some by a north, some by a south wind.

[7.8] Again the working of the soil and above all that which is done before the sowing has an important effect; for when the soil is well worked it bears easily. Also dung is helpful by warming and ripening the soil, for manured land gets the start by as much as twenty days of that which has not been

manured. However manure is not good for all crops; and further it is beneficial not only to corn and the like but to most other things, except fern, which they say it destroys if it is put on. (Fern is also destroyed if sheep lie on it, and, as some say, lucerne is destroyed by their dung and urine.)

[8.1] There is a particular kind of soil which best suits each kind of seed, whether we compare one class with another or those of the same class; and attempts are made to distinguish these. Foreign seeds change into the native sorts in about three years. It is well that they should be imported from a warm climate to one that is rather less warm, or from a cold one to one that is rather less cold. Those imported from a wintry climate, if they be those of early crops, are late in coming into ear, so that they get destroyed by drought unless rain late in the season saves them. Wherefore they say that one should take good heed not to mix foreign with native seeds, unless they come from a similar place, since they do not agree with the soil as to the time of being sown and of germinating, and accordingly need different cultivation; and so that one should take good heed to the differences of soil, the properties of the seed, and further the seasons appropriate to each.

[8.2] When however there is a good season, the grain also is fuller. For instance at Athens the barley produces more meal than anywhere else, since it is an excellent land for that crop; and this is so, not merely when a very large crop is sown, but when the weather has been favourable for it. And in Phocis about Elateia the wheats produce half as much meal again as elsewhere; while at Soli in Cilicia this is true of both wheat and barley; and in other parts there are other crops for which the soil is severally well adapted. Wherefore grain turns out better or worse because of the soil as well as because of cultivation; for in some places it changes into the cultivated from the wild form, or the reverse, like trees; and in general it changes according to the soil in which it is grown, just as some trees, when transplanted, forthwith deteriorate.

[8.3] But no kind can change altogether into another, except one-seeded wheat and rice-wheat, as we said in our previous discussions, and darnel which comes from degenerate wheat and barley: at least, if this is not the true account, darnel loves chiefly to appear among wheat, as does the Pontic melampyros and the seed of purse-tassels, even as other seeds appear in other crops; thus aigilops seems to grow for choice among barley, and among lentils the rough hard kind of arakos, while among tares occurs the axe-weed, which

resembles an axe-head in appearance. Indeed in the case of nearly every crop there is a plant which grows up with it and mingles with it, whether this is due to the soil, which is a reasonable explanation, or to some other cause. Some plants of this character evidently attach themselves to more than one kind of crop, but, because they are specially vigorous in some one particular crop, they are thought to be peculiar to that one, as 'vetch-strangler' (dodder) to vetches and bedstraw to lentils. But the former gains the mastery over the vetches especially because of the weakness of that plant; and bedstraw is specially luxuriant among lentils; to some extent it resembles dodder, in that it overspreads the whole plant and holds it fast as it were in coils, for it is thus that dodder strangles the plant, and this is the origin of its name ('vetch-strangler').

[8.4] The plant which springs up straight from the roots of cummin and the plant called broom-rape which similarly attaches itself to ox-horn (fenugreek) are somewhat more peculiar in their habits. Broom-rape has a single stem, and is not unlike . . . , but is much shorter and has on the top a sort of head, while its root is more or less round; and there is no other plant which it starves except fenugreek. These plants grow in light and not in fat soils; thus in Euboea they do not occur at Lelanton, but only about Kanethos and in districts of like character.

[8.5] The reason then why these plants, which attach themselves to more than one kind, grow stronger when attached to the plants specified, is that the latter are not robust.

[8.6] The terms 'cookable' and 'uncookable' are only applied to pulses, but it is not unreasonable to suppose that conditions like those indicated, if not identical with them, occur also in cereals, though they are not so obvious, since these plants are not put to the same use. Indeed it is said that these terms are not applied even to all pulses alike, but chiefly to beans and lentils, either because these are specially subject to these conditions, or because the use to which they are put makes them more conspicuous. At all events the conditions occur for a variety of reasons; for in many parts there are places which regularly produce seeds that are 'cookable,' while others again produce seeds that are 'uncookable'; in general however it is light soils which tend to produce the former. Now it is a certain condition of the climate which causes this variation; a proof of which is the fact that the same piece of land, tilled in

the same manner, produces sometimes seeds that are 'cookable,' sometimes seeds that are 'uncookable.' In the district of Philippi, if the beans, while being winnowed, are caught by the prevailing wind of the country, they become 'uncookable,' having previously been 'cookable.' These facts prove that for various reasons, of districts which are close together, have the same aspect and shew no difference of soil, some bear 'cookable' some 'uncookable' seeds, and that sometimes when there is only the breadth of a furrow between them.

[9.1] Wheat exhausts the land more than any other crop, and next to it barley; wherefore the former requires good soil, while barley will bear even on somewhat crumbling soils; and of leguminous plants chick-pea is the most exhausting, although this crop is in the ground only a very short time. Beans, as was said, are in other ways not a burdensome crop to the ground, they even seem to manure it, because the plant is of loose growth and rots easily; wherefore the people of Macedonia and Thessaly turn over the ground when it is in flower.

[9.2] Of the plants which resemble wheat or barley such as zeia (rice-wheat) one-seeded wheat olyra (rice-wheat) oats aigilops zeia is the strongest and most exhausts the ground; for it has many roots which run deep and many stems; but its fruit is the lightest and is welcome to all animals. Of the rest oats is the most exhausting; for this too has many roots and many stems. Olyra is a more delicate plant and not so robust as these. But one-seeded wheat is the crop which is of all the least burdensome to the soil; for it has but a single slender stem; wherefore also it requires a light soil and not, like zeia, one that is fat and good. These last two, zeia and one-seeded wheat, are also those which are likest to wheat, while aigilops and oats are as it were wild and uncultivated things.

[9.3] Aigilops also greatly exhausts the land, having many roots and many stems; while darnel is a plant which has become altogether wild. Of the crops sown at the summer seed-time sesame seems to be most severe on the land and to exhaust it most; yet millet has more numerous and stouter stems and more roots. Moreover there is a difference between crops which are called 'light' in relation to the soil and those called 'light' in regard to human use. For some, such as leguminous plants and millet, are light in one sense but not in the other; and, as was said, what is light for men is not necessarily so for

the other animals. Now enough of these matters.

[10.1] As to diseases of seeds some are common to all, as rust, some are peculiar to certain kinds; thus chick-pea is alone subject to rot and to being eaten by caterpillars and by spiders; and some seeds are eaten by other small creatures. Some again are liable to canker and mildew, as cummin. But creatures which do not come from the plant itself but from without do not do so much harm; thus the kantharis is a visitor among wheat, the phalangion in vetches, and other pests in other crops.

[10.2] Generally speaking, cereals are more liable to rust than pulses, and among these barley is more liable to it than wheat; while of barleys some kinds are more liable than others, and most of all, it may be said, the kind called 'Achillean.' Moreover the position and character of the land make no small difference in this respect; for lands which are exposed to the wind and elevated are not liable to rust, or less so, while those that lie low and are not exposed to wind are more so. And rust occurs chiefly at the full moon. Again wheat and barley are destroyed by winds, if they are caught by them either when in flower, or when the flower has just fallen and they are weak; and this applies specially to barley, indeed it occurs when the grain is already ripening, if the winds are violent and last a long time; for they dry up and parch the grain, which some call being 'wind-bitten.' Also a hot sun after cloudy weather destroys both, and wheat more than barley, so that the ear is not even conspicuous, since it is empty.

[10.3] Wheat is also destroyed by grubs; sometimes they eat the roots, as soon as they appear, sometimes they do their work when by reason of drought the ear cannot be formed; for at such times the grub is engendered, and eats the haulm as it is becoming unrolled; it eats right up to the ear and then, having consumed it, perishes. And, if it has entirely eaten it, the wheat itself perishes; if however it has only eaten one side of the haulm and the plant has succeeded in forming the ear, half the ear withers away, but the other half remains sound. However it is not everywhere that the wheat is so affected; for instance this does not occur in Thessaly, but only in certain regions, as in Libya and at Lelanton in Euboea.

[10.4] Grubs occur also in okhros, lathyros and peas, whenever these crops get too much rain and then hot weather supervenes; and caterpillars occur in chick-peas under the same conditions. All these pests perish, when they have

exhausted their food, whether the fruit in which they occur be green or dry, just as wood-worms do and the grubs found in beans and other plants, as was said of the pests found in growing trees and in felled timber. But the creature called ‘horned worm’⁶ is an exception. Now in regard to all these pests the position makes a great difference, as might be expected. For the climate, it need hardly be said, makes a difference according as it is hot or cold, moist or dry; and it was the climate which gave rise to these pests; wherefore they are not always found even in places in which they ordinarily occur.

[11.1] The seeds have not all the same capacity for germination and for keeping well. Some germinate and mature very quickly, and keep excellently, as Italian millet and millet. Some germinate well, but soon rot, as beans, and especially those that are ‘cookable’; so do tare and calavance; also barley perishes sooner than wheat; and dusty grain and that which is kept in plastered store-rooms perishes sooner than that which is kept in unplastered rooms.

[11.2] Again, as seeds decay, they engender special creatures, except chick-pea, which alone engenders none. As they rot, all produce a grub; but, as they get worm-eaten, each produces a special creature. Chick-pea and vetch keep best of all, and better still than these lupin; but this, as it were, is like a wild kind.

[11.3] It appears that soil and climate make a difference as to whether the seed gets worm-eaten or not; at least they say that at Apollonia on the Ionian Sea beans do not get eaten in this way at all, and therefore they are put away and stored; and about Cyzicus they keep an even longer time. It also makes a great difference to keeping that the seed should be gathered dry, for then there is less moisture in it. However the seeds of leguminous plants are gathered with a certain amount of moisture in them, because then they can be collected in greater quantity and more easily; for otherwise they are soon shed and get shrivelled up and split; and wheat and one kind of barley are gathered before they are dry, because then they are better for meal.

[11.4] Wherefore the grain of wheat and barley is put into heaps, and it seems to ripen in a heap rather than to lose substance. (However corn does not get worm-eaten when it is reaped after exposure to rain.) Also corn lasts better than other things if it is left standing, and so does lupin to an even greater extent; indeed this crop is not even gathered till rain has fallen, because, if it is gathered, the seed springs out and is lost.

[11.5] For propagation and sowing generally seeds one year old seem to be the best; those two or three years old are inferior, while those kept a still longer time are infertile, though they are still available as food. For each kind has a definite period of life in regard to reproduction. However these seeds too differ in their capacity according to the place in which they are stored. For instance, in Cappadocia at a place called Petra they say that seed remains even for forty years fertile and fit for sowing, while as food it is available for sixty or seventy years; for that it does not get worm-eaten at all, like clothes and other stored-up articles. For that the region is, apart from this, elevated and always exposed to fair winds and breezes which prevail alike from the east, the west, and the south. They say that in Media also and other elevated countries the seed when stored keeps for a long time. And it is plain that chick-pea, lupin, vetch, millet and the like will keep a far longer time than these seeds, as they do even in districts of Hellas. However these peculiarities, as has been said, are due to the particular region.

[11.6] There appears to be a kind of earth in some places, which when sprinkled over the seed helps to make wheat keep, for instance, the earth found at Olynthos and at Kerinthos in Euboea; this makes the grain inferior for food, but fuller in appearance; the earth is sprinkled in the proportion of one pint to twenty-four of grain.

[11.7] All seeds if exposed to fire perish and become infertile. Yet they say that at Babylon the grains of barley and wheat jump on the threshing-floor like corn which is being parched. However it is plain that it is some particular kind of warmth which produces this effect: or else the jumping is simply another effect of heat. Such behaviour would appear to be common to most, if not to all kinds.

[11.8] Some even of those kinds which seem to be more or less wild have peculiarities as to their germination and growth, for instance, lupin and aigilops. For lupin, although it is very robust, unless it is planted immediately after leaving the threshing-floor, turns out of poor growth, as was said, and refuses altogether to be buried in the ground; wherefore they sow it without first ploughing the land. And often if the seed has fallen amid thick undergrowth or herbage, it thrusts this aside, fastens on to the earth with its root and grows vigorously. It seeks sandy and poor soil for choice, and will not grow at all in cultivated soil.

[11.9] Aigilops has the opposite character; it grows better in tilled soil; and in some places where at first it would not grow, if the ground is tilled, it grows and yields a large crop, and in general it likes good soil. A peculiarity mentioned in regard to it as compared with other cereal seeds is that one seed in two does not germinate for a year. Wherefore those who wish to destroy it entirely, (since it is naturally hard to destroy), leave the fields unsown for two years, and, when it springs up, send in the sheep several times till they have grazed it down, and this is a way of completely destroying it. At the same time this testifies to the fact that the seed does not all germinate at once.

BOOK IX. OF THE JUICES OF PLANTS, AND OF THE MEDICINAL PROPERTIES OR HERBS.

[1.1] Moisture belongs to plants as such and some call it the 'sap' to give it a general name; and it plainly has special qualities in each plant. This moisture is attended by a taste, in some cases more, in some less, while in some it would seem to have none, so weak and watery is it. Now all plants have most moisture at the time of making growth, but it is strongest and most shows its character when the plant has ceased to grow and to bear fruit. Again in some plants the juice has a special colour; in some it is white, as in those which have a milky juice; in some blood-red, as in centaury and the spinous plant which is called distaff-thistle; in some green: and in some of other colours. And these qualities are more obvious in annual plants and those with annual stems than in trees.

[1.2] Again in some plants the juice is merely thick, as in those in which it is of milky character; but in some it is of gummy character, as in silver-fir, fir, terebinth, Aleppo pine, almond, kerasos (bird-cherry), bullace, Phoenician cedar prickly cedar, acacia, elm. For this last also produces a gum, though it does not exude from the bark, but is found in the 'bag' of the leaves; there are also the juices from which come frankincense and myrrh; for these too are gums; so too are balsam of Mecca khalbane and any others of the kind that there may be, such as, they say, the Indian akantha, from which comes something resembling myrrh; and a similar substance forms on mastich and the spinous plant called urine (pine-thistle), whence mastic-gum is made.

[1.3] All these have a fragrant odour, as in general have those which contain a viscous substance and are fatty; while those that are not fatty have no scent, as gum and the juice which exudes from the almond. The pine-thistle of Crete has also a gum, and so has the plant called tragacanth; this was formerly supposed to grow only in Crete, but now it is well known to grow also in Achaia in the Peloponnese and elsewhere in Hellas and in Asia in the Median country. In all these plants the gum occurs in the stems the trunks and the branches, but in some plants it is found in the roots, as in alexanders, scammony and many other medicinal plants. In some it is found in the stem and also in the root; for of some plants they tap the stem and the roots as well, as is done with silphium.

[1.4] Now the juice of alexanders is like myrrh, and some, having heard that myrrh comes from it, have supposed that, if myrrh is sown, alexanders comes up from it; for, as was said, this plant can be grown from an exudation, like the krinonia (lily) and other plants. The juice of silphium is pungent like the plant itself; for what is called the 'juice' of silphium is a gum. Scammony and similar plants, as was said, have medicinal properties.

[1.5] In all the plants mentioned the juice either forms naturally, or when incisions are made, or in both ways, but it is obvious that men only make incisions in plants whose juice is of use and is specially sought after. Now there is no use in the gum which exudes from the almond, wherefore men do not tap it. However it is plain that in plants whose gum forms naturally the flow of juice is greater. The incisions and the clotting of the juice do not take place at the same season in all cases; but the juice of the vine clots best they say if the incision is made a little before budding begins, less well in the autumn or at the beginning of winter; (although in regard to production of fruit these seasons are the best in the case of most vines). However with terebinth fir or any other tree which produces resin the best time is after the period of budding; yet in general these trees are not cut every year, but at longer intervals. The frankincense and myrrh trees they say should be cut at the rising of the Dogstar and on the hottest days, and so also the Syrian balsam ' (balsam of Mecca).

[1.6] The cutting of these is also a more delicate matter and is done on a smaller scale; for the flow of juice is less. In those plants whose stem and root are both cut the stem is cut first, as also with silphium; and the juices so obtained are called respectively stalk-juice and root-juice, of which the latter is the better, for it is clear transparent and less liquid. The stalk-juice is more liquid, and for this reason they sprinkle meal over it to make it clot. The Libyans know the season for cutting, for it is they that gather the silphium. So also do the rootdiggers and those that collect medicinal juices, for these too tap the stems earlier. And in general all those who collect whether roots or juices observe the season which is appropriate in each case. And this remark applies generally.

[2.1] Resin is made in the following manner: in fir it is done by removing the resinous wood after the tree has been tapped; for then the juice flows into the hole so made in greater abundance; in silver-fir and Aleppo pine it is done by

tapping the wood, after tasting it. For there is no fixed rule for all alike; thus with terebinth they tap both the stem and the branches; but the juice which runs into the stem is always more abundant and better than that which flows into the branches.

[2.2] There are also differences in the resin obtained from different trees. The best is that of terebinth; for it sets firm, is the most fragrant, and has the most delicate smell; but the yield is not abundant. Next comes that of silver-fir and Aleppo pine, for these are more delicate than that of the fir. But that of the fir is the most abundant, the grossest and the most pitchlike, because this tree has the greatest amount of resinous wood. It is carried about in baskets in a liquid state, and so acquires the more solid form which we know. However they say that in Syria pitch is extracted even from the terebinth by burning; for there is in that land a mountain which, as we said before, is all covered with great terebinths.

[2.3] Some say the same of Aleppo pine and also of Phoenician cedar; but this must be taken as only indicating what can be done, the practice not being common; for the people of Macedonia do not extract pitch by burning even from fir, except from the 'male' kind (they call the kind which bears no fruit the 'male'); the 'female' kind they only treat in this way when they have found roots containing pitch; for all firs have resinous wood extending to the roots. The finest and purest pitch is that obtained from trees growing in a sunny position and facing north; that obtained from trees growing in shade is coarser and muddy; (in exceedingly shady places the fir does not even grow at all).

[2.4] Again the yield may be either good or bad as to amount and as to quality; thus, when there is a moderate winter, it is abundant and good and whiter in colour, but, when there is a severe winter, it is scanty and of inferior quality. And it is these conditions, and not the tree's capacity for bearing fruit, which determine the amount and quality of pitch.

[2.5] The people of Mount Ida distinguish different kinds of fir, calling one 'that of Mount Ida' (Corsican pine), another the 'fir of the seashore' (Aleppo pine); and they say that the pitch obtained from the former is more abundant blacker sweeter and generally more fragrant in the raw state, but that boiling down reduces the amount; for that it contains a larger proportion of watery matter, wherefore it is less substantial; but that derived from the 'fir of the

seashore' is browner and thicker in the raw state, so that the amount is less reduced by boiling down; that the 'fir of Mount Ida' however contains more resinous wood. And, speaking generally, they say that from an equal amount of resinous wood more pitch is obtained and in a more liquid state in wet weather than during a drought, and from a wintry and shady position than from one that is sunny and enjoys fair weather. Such is the account given by the peoples of Mount Ida and of Macedonia respectively.

[2.6] The holes for the pitch fill up, so that the pitch can be again removed/ in good firs in a year, in those of more moderate quality in two years, in poor trees in three. The filling-up is composed of the pitch; it is not caused by closing up of the wood; for the wood cannot close up and become one again, but the effect which takes the time mentioned is due to the formation of the pitch. However it is clearly inevitable that there should be some new growth of the wood too, seeing that the resinous wood is removed and burnt when the discharge of pitch takes place. So much for this account.

[2.7] The people of Mount Ida however say that, when they bark the stem, and they bark the side towards the sun to a height of two or three cubits from the ground, the flow of pitch takes place in that part, and in about a year the wood becomes full of pitch; and that, when they have hewn this part out, pitch forms again in the next year, and in the third year in like manner; after which that the tree, because it has been cut away underneath, is rotted by the winds and falls; and that then they take out its heart, for that is especially full of pitch, and that they also extract pitch from the roots; for that these too, as we said, are full of pitch in all firs.

[2.8] Now it is plainly to be expected that they should, as was said, repeatedly thus treat a good tree, but an inferior one at longer intervals, and that, if the tree is husbanded, the supply should hold out longer, while, if they remove all the pitch, it will not hold out so long; it appears as a matter of fact that the tree will stand about three such removals of its substance. However firs do not produce both fruit and pitch at once; they begin to bear fruit when they are quite young, but they only produce pitch much later, when they are older.

[3.1] This is the manner in which they make pitch by fire: having prepared a level piece of ground, which they make like a threshing-floor with a slope for the pitch to run towards the middle, and having made it smooth, they cleave

the logs and place them in an arrangement like that used by charcoal-burners, except that there is no pit; but the billets are set upright against one another, so that the pile goes on growing in height according to the number used. And they say that the erection is complete, when the pile is 180 cubits in circumference, and fifty, or at most- sixty, in height; or again when it is a hundred cubits in circumference and a hundred in height, if the wood happens to be rich in pitch. Having then thus arranged the pile and having covered it in with timber they throw on earth and completely cover it, so that the fire may not by any means show through; for, if this happens, the pitch is ruined. Then they kindle the pile where the passage is left, and then, having filled that part up too with the timber and piled on earth, they mount a ladder and watch wherever they see the smoke pushing its way out, and keep on piling on the earth, so that the fire may not even shew itself. And a conduit is prepared for the pitch right through the pile, so that it may flow into a hole about fifteen cubits off, and the pitch as it flows out is now cold to the touch. The pile burns for nearly two days and nights; for on the second day before sunset it has burnt itself out and the pile has fallen in; for this occurs if the pitch is no longer flowing. All this time they keep watch and do not go to rest, in case the fire should come through; and they offer sacrifice and keep holiday, praying that the pitch may be abundant and good. Such is the manner in which the people of Macedonia make pitch by fire.

[3.2] They say that in Asia in the Syrian region they do not extract the pitch by cutting out of the tree the wood containing it, but use fire to the tree itself, applying an instrument fashioned on purpose, with which they set fire to it. And then, when they have melted out the pitch at once place, they shift the instrument to another. But they have a limit and indications when to stop, chiefly of course the fact that the pitch ceases to flow. They also, as was said before, use fire to get pitch out of the terebinth; for the places where this tree grows do not produce the fir. Such are the facts about resin and pitch.

[4.1] As to frankincense myrrh balsam of Mecca and similar plants it has been said that the gum is produced both by incision and naturally. Now we must endeavour to say what is the natural character of these trees and to mention any peculiarities as to the origin of the gum or its collection or anything else. So too concerning the other fragrant plants; most of these come from places in the south and east.

[4.2] Now frankincense myrrh cassia and also cinnamon are found in the Arabian peninsula about Saba Hadramyta Kitibaina and Mamali. The trees of frankincense and myrrh grow partly in the mountains, partly on private estates at the foot of the mountains; wherefore some are under cultivation, others not; the mountains, they say, are lofty, forest-covered and subject to snow, and rivers from them flow down to the plain. The frankincense-tree, it is said, is not tall, about five cubits high, and it is much branched; it has a leaf like that of the pear, but much smaller and very grassy in colour, like rue; the bark is altogether smooth like that of bay.

[4.3] The myrrh-tree is said to be still smaller in stature and more bushy; it is said to have a tough stem, which is contorted near the ground, and is stouter than a man's leg; and to have a smooth bark like that of andrachne. Others who say that they have seen it agree pretty closely about the size; neither of these trees, they say, is large, but that which bears myrrh is the smaller and of lower growth; however they say that, while the frankincense-tree has a leaf like that of bay and smooth bark, that which bears myrrh is spinous and not smooth, and has a leaf like that of the elm, except that it is tiurly and spinous at the tip like that of kermes-oak.

[4.4] These said that on the coasting voyage which they made from the bay of the Heroes they landed to look for water on the mountains and so saw these trees and the manner of collecting their gums. They reported that with both trees incisions had been made both in the stems and in the branches, but that, while the stems looked as if they had been cut with an axe, in the branches the incisions were slighter; also that in some cases the gum was dropping, but that in others it remained sticking to the tree; and that in some places mats woven of palm-leaves were put underneath, while in some the ground underneath was merely made level and clean; and that the frankincense on the mats was clear and transparent, that collected on the ground less so; and that that which remained sticking to the trees they scraped off with iron tools, wherefore sometimes pieces of bark remained in it. The whole range, they said, belongs to the portion of the Sabaeans; for it is under their sway, and they are honest in their dealings with one another. Wherefore no one keeps watch; so that these sailors greedily took, they said, and put on board their ships some of the frankincense and myrrh, since there was no one about, and sailed away. They also reported another thing which they said they had been told, that the myrrh

and frankincense are collected from all parts into the temple of the sun; and that this temple is the most sacred thing which the Sabaeans of that region possess, and it is guarded by certain Arabians in arms. And that when they have brought it, each man piles up his own contribution of frankincense and the myrrh in like manner, and leaves it with those on guard; and on the pile he puts a tablet on which is stated the number of measures which it contains, and the price for which each measure should be sold; and that, when the merchants come, they look at the tablets, and whichever pile pleases them, they measure, and put down the price on the spot whence they have taken the wares, and then the priest comes and, having taken the third part of the price for the god, leaves the rest of it where it was, and this remains safe for the owners until they come and claim it.

[4.5] Others report that the tree which produces the frankincense is like mastich, and its fruit is like the fruit of that tree, but the leaf is reddish: also that the frankincense derived from young trees is whiter and less fragrant, while that derived from those which have passed their prime is yellower and more fragrant; also that the tree which produces myrrh is like the terebinth, but rougher and more thorny; that the leaf is somewhat rounder, and that, if one chews it, it resembles that of the terebinth in taste; also that of myrrh-trees too those that are past their prime give more fragrant myrrh.

[4.6] Both trees, it is said, grow in the same region; the soil is clayey and caked, and spring waters are scarce. Now these reports are contradictory to that which says that the country is subject to snow and rain and sends forth rivers. However others make the statement that the tree is like the terebinth; in fact some say that it is the same tree; for that logs of it were brought to Antigonus by the Arabs who brought the frankincense down to the sea, and that these did not differ at all from logs of terebinth. However these informants were guilty of a further more important piece of ignorance; for they believed that the frankincense and the myrrh were produced by the same tree. Wherefore the account derived from those who sailed from the city of Heroes is more to be believed; in fact the frankincense-tree which grows above Sardes in a certain sacred precinct has a leaf like that of bay, if we may judge at all by this; and the frankincense derived both from its stem and its branches is like in appearance and in smell, when it is burnt as incense, to other frankincense. This is the only tree which can never be cultivated.

[4.7] Some say that the frankincense-tree is more abundant in Arabia, but finer in the adjacent islands over which the Arabians bear rule; for there it is said that they mould the gum on the trees to any shape that they please. And perhaps this is not incredible, since it is possible to make any kind of incision that they like. Some of the lumps of gum are very large, so that one is large enough in bulk to fill the hand and in weight is more than a third of a pound. All frankincense is gathered in the rough and is like bark in appearance. Myrrh is either 'fluid' (myrrh-oil) or 'solid' (agglutinated). That of better quality is tested by its taste, and of this they select that which is of uniform colour. Now of frankincense and myrrh these are about all the facts that have come to our notice at present.

[5.1] Of cinnamon and cassia the following account is given: both are shrubs, it is said, and not of large size, but of the same size as bushes of chaste-tree, with many branches and woody. When they cut down the whole cinnamon-tree, they divide it into five parts; of these the first is that which grows next the branches and this is the best: this is cut in lengths a span long or a little longer; next comes the second kind, which is cut in shorter lengths; then come the third and the fourth, and last the least valuable wood, which grows next the root; for this has least bark, and it is the bark and not the wood which is serviceable; wherefore the part which grows high up the tree is the best, since it has the most bark. Such is the account given by some.

[5.2] Others say that cinnamon is shrubby or rather like an under-shrub; and that there are two kinds, one black, the other white. And there is also a tale told about it; they say that it grows in deep glens, and that in these there are numerous snakes which have a deadly bite; against these they protect their hands and feet before they go down into the glens, and then, when they have brought up the cinnamon, they divide it in three parts and draw lots for it with the sun; and whatever portion falls to the lot of the sun they leave behind; and they say that, as soon as they leave the spot, they see this take fire. Now this is sheer fable.

[5.3] Cassia, they say, has stouter branches, which are very fibrous and difficult to strip of the bark; and it is the bark of this tree also which is serviceable. When then they cut off the branches, they chop them up into lengths of about two fingers' breadth or rather more, and these they sew up in raw hide; and then from the leather and the decaying wood little worms are

engendered, which devour the wood but do not touch the bark, because it is bitter and has a pungent odour. This is all the information forthcoming about cinnamon and cassia.

[6.1] Balsam of Mecca grows in the valley of Syria. They say that there are only two parks in which it grows, one of about four acres, the other much smaller. The tree is as tall as a good-sized pomegranate and is much branched; it has a leaf like that of rue, but it is pale; and it is evergreen; the fruit is like that of the terebinth, in size shape and colour, and this too is very fragrant, indeed more so than the gum.

[6.2] The gum, they say, is collected by making incisions, which is done with bent pieces of iron at the time of the Dog-star, when there is scorching heat; and the incisions are made both in the trunks and in the upper parts of the tree. The collecting goes on throughout the summer; but the quantity which flows is not large; in a day a single man can collect a shell-full; the fragrance is exceeding great and rich, so that that which comes from a small amount is perceived for a wide distance. However it does not reach us in a pure state; what is collected is mixed with other things; for it mixes freely with other things; and what is known in Hellas is generally mixed with something else. The boughs are also very fragrant. In fact it is on account of these boughs, they say, that the tree is pruned (as well as for a different reason), since the boughs cut off can be sold for a good price. In fact the culture of the trees has the same motive as the irrigation (for they are constantly irrigated). And the cutting of the boughs seems likewise to be partly the reason why the trees do not grow tall; for, since they are often cut about, they send out branches instead of putting out all their energy in one direction.

[6.3] Balsam is said not to grow wild anywhere. From the larger park are obtained twelve vessels containing each about three pints, from the other only two such vessels; the pure gum sells for twice its weight in silver, the mixed sort at a price proportionate to its purity. Balsam then appears to be of exceptional fragrance.

[7.1] Sweet-flag and ginger-grass grow beyond the Libanus between that range and another small range, in the depression thus formed; and not, as some say, between Libanus and Anti-Libanus. For Anti-Libanus is a long way from Libanus, and between them is a wide fair plain called 'The Valley.' But, where the sweet-flag and gingergrass grow, there is a large lake, and they

grow near it in the dried up marshes, covering an extent of more than thirty furlongs. They have no fragrance when they are green, but only when they are dried, and in appearance they do not differ from ordinary reeds and rushes; but, as you approach the spot, immediately a sweet smell strikes you. However it is not true, as some say, that the fragrance is wafted to ships approaching the country; for indeed this district is more than 150 furlongs from the sea. However it is said that in Arabia the breezes wafted from the land are fragrant.

[7.2] Such then are the plants in Syria which have remarkable fragrance. For that of khalbane is more oppressive and somewhat medicinal; for this perfume also is produced in Syria from the plant called allheal. As to all the other fragrant plants used for aromatic odours, they come partly from India whence they are sent over sea, and partly from Arabia, for instance, komakon as well as cinnamon and cassia. The fruit called komakon is said to be distinct from this; the komakon of which we are speaking is a perfume which they mix with the choicest unguents. Cardamom and Nepaul cardamom some say come from Media; others say that these come from India, as well as spikenard and most, if not all, of the other species.

[7.3] Now this is a general list of the plants used for perfumes: cassia, cinnamon, cardamom, spikenard, natron, balsam of Mecca, aspalathos, storax, iris, narte, kostos, all-heal, saffron-crocus, myrrh, kypeiron, gingergrass, sweet-flag, sweet marjoram, lotos, dill. Of these it is the roots, bark, branches, wood, seeds, gum or flowers which in different cases yield the perfume. Some of them grow in many places, but the most excellent and most fragrant all come from Asia and sunny regions. From Europe itself comes none of them except the iris.

[7.4] This is best in Illyria, not in the part near the sea, but in that which is further inland and lies more to the north. In different districts it varies in quality; no special attention is needed, except to scrape the roots clean and dry them.

[7.5] As for the roots which grow in Thrace, such as one which has a smell like spikenard and certain others, their fragrance is but slight and feeble. Let this suffice for an account of sweet-smelling plants.

[8.1] Now we must endeavour to speak in like manner of those juices which have not been mentioned already, I mean, such as are medicinal or have other

properties; and at the same time we must speak of roots; for some of the juices are derived from roots, and apart from that roots have in themselves divers properties of all kinds; and in general we must discuss medicinal things of all kinds, as fruit, extracted juice, leaves, roots, 'herbs'; for the herb-diggers call some medicinal things by this name.

[8.2] The properties of 'roots' are numerous and they have numerous uses; but those which have medicinal virtues are especially sought after, as being the most useful; and they differ in not all being applied to the same purposes and in not all having their virtue in the same parts of them. To speak generally, most 'roots' have it in themselves; or else it is found in the fruits or the juices of the plant; and in some cases in the leaves as well, and it is to the virtues of the leaves in most cases that the herb-diggers refer, when they speak, as has just been said, of 'herbs.'

[8.3] The collection of the juice from plants from which it is collected is mostly done in summer, in some cases at the beginning of that season, in others when it is well advanced. The digging of roots is done in some cases at the time of wheat-harvest or a little earlier, but the greater part of it in autumn after the rising of Arcturus when the plants have shed their leaves, and, in the case of those whose fruit is serviceable, when they have lost their fruit. The collection of juice is made either from the stalks, as with tithymallos (spurge) wild lettuce and the majority of plants, or from the roots, or thirdly from the head, as in the case of the poppy; for this is the only plant which is so treated and this is its peculiarity. In some plants the juice collects of its own accord in the form of a sort of gum, as with tragacanth; for incision of this plant cannot be made; but in most it is obtained by incision. In some cases the juice is collected straight into vessels, for instance that of tithymallos (spurge) or mekonion (for the plant has both names) and in general the juice of specially juicy plants is so collected. But that of those which do not yield abundant juice is taken with a piece of wool, as also that of wild lettuce.

[8.4] In some cases there can be no collection of juice, but there is a sort of extraction of it, for instance in the case of plants which are cut down or bruised; they then pour water over them and strain off the fluid, keeping the sediment; but it is plain that in these cases the juice obtained is dry and less copious. In most 'roots' the juice thus extracted is less powerful than that of the fruit, but in hemlock it is stronger and it causes an easier and speedier

death even when administered in a quite small pill; and it is also more effective for other uses. That of thapsia is also powerful, while all the rest are less so. Such then is a general account of the various ways of obtaining the juices of plants.

[8.5] As to cutting of the roots there is no such diversity of practice, except as to the season, which may be summer or autumn, and as to the particular roots selected. Thus in hellebore the slender lower roots are taken, for they say that the thick upper part which forms a sort of head is useless, and that it is only given to dogs when it is desired to purge them. And in certain other plants also such differences are mentioned.

[8.6] Further we may add statements made by druggists and herb-diggers, which in some cases may be to the point, but in others contain exaggeration. Thus they enjoin that in cutting some roots one should stand to windward, for instance, in cutting thapsia among others, and that one should first anoint oneself with oil, for that one's body will swell up if one stands the other way. Also that the fruit of the wild rose must be gathered standing to windward, since otherwise there is danger to the eyes. Also that some roots should be gathered at night, others by day, and some before the sun strikes on them, for instance those of the plant called honeysuckle.

[8.7] These and similar remarks may well seem to be not off the point, for the properties of these plants are hurtful; they take hold, it is said, like fire and burn; for hellebore too soon makes the head heavy, and men cannot go on digging it up for long; wherefore they first eat garlic and take a draught of neat wine therewith. On the other hand the following ideas may be considered far-fetched and irrelevant; for instance they say that the peony, which some call glykyside, should be dug up at night, for, if a man does it in the day-time and is observed by a woodpecker while he is gathering the fruit, he risks the loss of his eyesight; and, if he is cutting the root at the time, he gets a prolapsed rectum.

[8.8] It is also said that, while cutting feverwort one must beware of the buzzard-hawk, if one wishes to come off unhurt; and other reasons for caution are also given. That one should be bidden to pray while cutting is not perhaps unreasonable, but the additions made to this injunction are absurd; for instance as to cutting the kind of all-heal which is called that of Asklepios; for then it is said that one should put in the ground in its place an offering made

of all kinds of fruits and a cake; and that, when one is cutting gladwyn, one should put in its place to pay for it cakes of meal from spring-sown wheat, and that one should cut it with a two-edged sword, first making a circle round it three times, and that the piece first cut must be held up in the air while the rest is being cut.

[8.9] And many similar notions are mentioned. Thus it is said that one should draw three circles round mandrake with a sword, and cut it with one's face towards the west; and at the cutting of the second piece one should dance round the plant and say as many things as possible about the mysteries of love. (This seems to be like the direction given about cummin, that one should utter curses at the time of sowing.) One should also, it is said, draw a circle round the black hellebore and cut it standing towards the east and saying prayers, and one should look out for an eagle both on the right and on the left; for that there is danger to those that cut, if your eagle should come near, that they may die within the year. These notions then seem to be irrelevant, as has been said. There are however no methods of root-cutting besides those which we have mentioned.

[9.1] As was said, of some plants the root, fruit and juice are all serviceable, as of all-heal among others; of some the root and the juice, as of scammony, cyclamen, thapsia and others, such as mandrake; for the leaf of this, they say, used with meal, is useful for wounds, and the root for erysipelas, when scraped and steeped in vinegar, and also for gout, for sleeplessness, and for love potions. It is administered in wine or vinegar; they cut little balls of it, as of radishes, and making a string of them hang them up in the smoke over must.

[9.2] Of hellebore both root and fruit are useful for the same purposes, if it is true, as is said, that the people of Anticyra use the fruit as a purge; this fruit contains the well-known drug called sesamodes.

[9.3] Various parts of all-heal are also useful, and not all for the same purposes; the fruit is used in cases of miscarriage and for disorders of the bladder, while the juice, which is called khalbane, is used in cases of miscarriage and also for sprains and such-like troubles; also for the ears, and to strengthen the voice. The root is used in childbirth, for diseases of women, and for flatulence in beasts of burden. It is also useful in making the iris-perfume because of its fragrance; but the seed is stronger than the root. It

grows in Syria and is cut at the time of wheat-harvest.

[9.4] Of cyclamen the root is used for suppurating boils; also as a pessary for women and, mixed with honey, for dressing wounds; the juice for purgings of the head, for which purpose it is mixed with honey and poured in; it also conduces to drunkenness, if one is given a draught of wine in which it has been steeped. They say also that the root is a good charm for inducing rapid delivery and as a love potion; when they have dug it up, they burn it, and then, having steeped the ashes in wine, make little balls like those made of wine-lees which we use as soap.

[9.5] Of 'wild cucumber'(squirting cucumber) the root is used for white leprosy and for mange in sheep, while the extracted juice makes the drug called 'the driver' (elaterion). It is collected in autumn, for then it is best.

[9.6] Of germander the leaves pounded up in olive-oil are used for fractures and wounds and for spreading sores; the fruit purges bile, and is good also for the eyes; for ulcers in the eye they pound up the leaf in olive-oil before applying it. It has leaves like the oak, but its entire growth is only about a palm high; and it is sweet both to smell and taste.

[9.7] Now that all parts are not serviceable for the same purpose is perhaps not strange; it is more surprising that part of the same 'root' should purge upwards and another part downwards, as is the case with thapsia and iskhas which some call apios (spurge) and with libanotis; for it is not strange that on the other hand the same parts should purge both upwards and downwards, as is the case with 'driver.'

[9.8] Thapsia has a leaf like fennel, but broader, a stalk like that of ferula, and a white root.

[9.9] Iskhas (or apios) has a leaf like rue and short, three or four prostrate stems, and a root like that of asphodel, except that it is composed of scales; it loves mountain districts with a gravelly soil. It is collected in spring. Now this account applies only to the above-mentioned plants.

[10.1] The white and the black hellebore appear to have nothing in common except the name. But accounts differ as to the appearance of the plants; some say that the two are alike and differ only in colour, the root of the one being white, of the other black; some however say that the leaf of the 'black' is like that of bay, that of the white like that of the leek, but that the roots are alike except for their respective colours. Now those who say that the two plants are

alike describe the appearance as follows: the stem is like that of asphodel and very short; the leaf has broad divisions, and is extremely like that of ferula, but is long; it is closely attached to the root and creeps on the ground; the plant has numerous roots, to wit, the slender roots which are serviceable.

[10.2] Also they say that the black is fatal to horses oxen and pigs, wherefore none of these animals eat it; while the white is eaten by sheep, and from this circumstance the virtue of the plant was first observed, since it purges them; it is at its prime in autumn, and past its prime when spring comes. However the people of Mount Oeta gather it for the meetings of the Amphictyons; for it grows there in greatest abundance and best, though at only one place in the district of Oeta, namely about Pyra.

[10.3] (The seed of rupture-wort is mixed with the potion given to promote easy vomiting; this plant is a small herb).

[10.4] The black kind of hellebore grows everywhere; it is found in Boeotia, in Euboea and in many other places; but best is that from Mount Helicon, which mountain is in general rich in medicinal herbs. The white occurs in few places; the best and that which is most used comes from one of four places, Oeta, Pontus, Elea, and Malea. They say that that of Elea grows in the vineyards and makes the wine so diuretic that those who drink it become quite emaciated.

[10.5] But best of all these and better than that found anywhere else is that of Mount Oeta, while that of Parnassus and that of Aetolia (for the plant is common in these parts too and men buy and sell it, not knowing the difference) are tough and exceeding harsh. These plants then, while resembling the best form in appearance, differ in their virtues.

[10.6] Some call the black the ‘hellebore of Melampus,’ saying that he first cut and discovered it. Men also purify horses and sheep with it, at the same time chanting an incantation; and they put it to several other uses.

[11.1] There are also several kinds of all-heal tithymallos (spurge) and other herbs. To begin with, one plant called all-heal is the one found in Syria, of which we have recently spoken. Then come the three other kinds, known as that of Chaeronea, that of Asclepios, and that of Heracles. That of Chaeronea has a leaf like monk’s rhubarb, but larger and rougher, a golden flower, and a small root; and it specially loves rich ground; they use it for the bites of snakes, spiders, vipers and other reptiles, administering it in wine or anointing

the place with it mixed with olive-oil. In treating a snake-bite they use a plaster of it, and also give a draught of it mixed with vinegar; and they also say that it is good for sores when mixed with wine and olive-oil, and for tumours when mixed with honey.

[11.2] The kind called after Asclepios has a white and very stout root about a span long and a thick bark which is crusted with salt; its stem is jointed all the way up, its leaf like that of thapsia, but thicker; it is said that it is good to scrape and drink it against bites of reptiles, to take it in a posset of honey for disorders of the spleen, when the blood collects about it, and against headache to pound it up in olive-oil and anoint the head; that it is of use also in other obscure troubles, and against stomachache, if scraped and taken in wine. It is said also to be able to prevent long periods of sickness. Again for running sores one may sprinkle it on in hot wine, first washing the place, while for dry sores one may soak it in wine and apply a plaster.

[11.3] The kind named after Herakles has a large broad leaf, three spans each way, a root as thick as a man's finger, forking in two or three; in taste it is somewhat bitter, in smell like pure frankincense; it is good to drink it against epilepsy, mixed with the rennet of a seal in the proportion of one to four, or in sweet wine against pain in the stomach; it may be used dry for running sores, and mixed with honey for dry ones. Such are the special features about these plants and their respective virtues.

[11.4] There are also other kinds of all-heal, of which one has a fine leaf, the other not; the properties of both kinds are the same; namely they are used as a pessary for women, and a plaster may be made of them mixed with meal for spreading sores as well as for ordinary sores.

[11.5] Of the various plants called stryknos. As to stryknos again and tithymallos (spurge) there is in either case more than one form of the plant denoted by the name. Of the plants called stryknos one induces sleep, the other (thorn-apple) causes madness. The first-mentioned has a root which becomes red like blood as it dries, but when first dug up it is white; its fruit is a deeper orange than saffron, its leaf like that of tithymallos or the sweet apple; and it is itself rough, and about a foot high. The 'bark' of the root of this they bruise severely, and soaking it in neat wine give it as a draught, and it induces sleep. It grows in water-courses and on tombs.

[11.6] The kind which produces madness (which some call thryoron and

some peritton) has a white hollow root about a cubit long. Of this three twentieths of an ounce in weight is given, if the patient is to become merely sportive and to think himself a fine fellow; twice this dose if he is to go mad outright and have delusions; thrice the dose, if he is to be permanently insane; (and then they say that the juice of centaury is mixed with it); four times the dose is given, if the man is to be killed. The leaf is like that of rocket, but larger, the stem about a fathom long; the 'head' is like that of a long onion, but larger and rougher. And it also resembles the fruit of the plane-tree.

[11.7] Of the various plants called tithymallos (spurge) that which is called sea-spurge has a round scarlet leaf; the stem (and the size of the plant generally) is about a span long, and the fruit is white. It is gathered when the grape is just turning, and the dried fruit is given in a draught, the dose being the twenty-fourth part of a pint.

[11.8] That which is called the 'male' has a leaf like the olive, and the height of the whole plant is a cubit. Of this they collect the juice at the time of vintage, and, after preparing it, use it as occasion demands; and it purges chiefly downwards.

[11.9] The kind of tithymallos called 'myrtle-like' is white; it has a leaf like the myrtle, but spinous at the tip; it puts out earthward twigs about a span long, and these bear the fruit not all at the same time but in alternate years, so that from the same root grow fruits partly this and partly next year. It loves hill-country. The fruit of it is called a 'nut.' They gather it when the barley is ripening and dry and clean it; (it is the actual fruit which they clean); they wash it in water and, after drying it again, give it in a draught, mixing with it two parts of 'black poppy'; and the whole dose amounts to about an eighth of a pint. It purges phlegm downwards. If they administer the 'nut' itself, they first pound it up in sweet wine, or give it in parched sesame to bite up. These plants then have leaves juices or fruits which are serviceable.

[11.10] Of the plants called libanotis, (for there are two) one is barren, the other fruitful, the latter having both fruit and leaves that are serviceable, the former only a serviceable root. The fruit is called kakhry. This plant has a leaf like marsh celery, but much larger, a stem a cubit long or more, a large stout white root, which smells like frankincense, and a white rough elongated fruit. It grows chiefly wherever there is parched and rocky soil; the root is serviceable for sores, and for diseases of women when given in a draught of

dry black wine. The fruit is good for strangury, for the ears, for ulcers on the eye, for ophthalmia and for producing milk in women.

[11.11] The barren kind has a leaf like that of the bitter lettuce, but rougher and paler; the root is short. It grows where there is abundance of heather. The root can purge both upwards and downwards, the upper part being used for the former, that nearer the ground for the latter purpose. Also, if it is put among clothes, it prevents moth. It is gathered at the time of wheat-harvest.

[12.1] Of chamaeleon there is the white kind and the dark; the properties of the roots are different, and the roots also differ in appearance. In the one case the root is white, stout and sweet, and it has a heavy smell; they say that when cooked it is serviceable against flux; it is chopped up like radishes and the pieces strung on a rush; it is also good against the broad maw-worm; the patient first eats a bunch of raisins and then drinks about an eighth of a pint of this scraped up in a draught of dry wine. It is fatal to dogs and pigs; to kill a dog it is well mixed up in a meal paste with oil and water, to kill a pig it is mixed with 'mountain cabbage' (spurge). It is given to a woman in sweet winelees or sweet wine. And if one wishes to discover whether a man that is sick will recover, they say that he should be washed with this for three days, and, if he survives the experience, he will recover. It grows everywhere alike and has a leaf like the golden thistle, but larger; the plant itself has a large thistle-like head close to the ground; some actually call it the thistle.

[12.2] The dark kind resembles the other in leaf, which is like that of the golden thistle but smaller and smoother; the plant itself is in general appearance like a sunshade; the root is stout and black, and when broken is yellowish. It likes cold uncultivated soil: it has the property of expelling leprosy; for this it is given pounded up in vinegar, or else scrapings of it are made into a plaster; and it is also used for the white leprosy. This plant is also fatal to dogs.

[12.3] There are several kinds of wild poppy: the one called the horned poppy is black: the leaf of this is like that of the black mullein, but it is not so black; the stem grows about a cubit high, the root is stout and shallow, the fruit is twisted like a little horn: it is gathered at the time of wheat harvest. It has the property of purging the belly, and the leaf is used for removing ulcers on sheep's eyes. It grows by the sea, wherever there is rocky ground.

[12.4] Another kind of poppy is that called rhoias, which is like wild chicory,

wherefore it is even eaten: it grows in cultivated fields and especially among barley. It has a red flower, and a head as large as a man's finger-nail. It is gathered before the barley-harvest, when it is still somewhat green. It purges downwards.

[12.5] Another kind of poppy is called Herakleia: it has a leaf like soap-wort, with which they bleach linen: the root is slender and does not run deep, and the fruit is white. The root of this plant purges upwards: and some use it in a posset of mead for epileptics. These kinds then are distinct plants, though they come under one name.

[13.1] The differences between roots are shown in their tastes and in their smells: some are pungent, some bitter, some sweet: some again have a pleasant, others a disagreeable smell. The plant called yellow water-lily is sweet: it grows in lakes and marshy places, as in the district of Orchomenus, at Marathon and in parts of Crete: the Boeotians, who eat the fruit, call it madondis. It has a large leaf which lies on the water: and it is said that it acts as a styptic if it is pounded up and put on the wound: it is also serviceable in the form of a draught for dysentery.

[13.2] 'Scythian root'(liquorice) is also sweet; some indeed call it simply 'sweet-root.' It is found about Lake Maeotis: it is useful against asthma or a dry cough and in general for troubles in the chest: also, administered in honey, for wounds: also it has the property of quenching thirst, if one holds it in the mouth: wherefore they say that the Scythians, with the help of this and mares' milk cheese can go eleven or twelve days without drinking.

[13.3] [Birthwort is fragrant to the smell but in taste is very bitter: in colour it is black. The best grows on the mountains: it has a leaf like alsine, but rounder: it is useful for many purposes, and is best for sores on the head and other sores, also for bites of reptiles, for inducing sleep and for disorders of the womb. It is directed that it should be applied as a plaster, steeped in water, and for the other purposes should be given shredded into honey and olive-oil: for snake-bites it should be taken in sour wine and also used as a plaster on the bite: to induce sleep it should be scraped up and administered in black dry wine; in cases of prolapsed uterus a lotion of it mixed with water should be applied.]

[13.4] These then are sweet: other roots are bitter, and some unpleasant to the taste. Of those that are sweet there are some that cause mental derangement,

as the plant like the golden thistle which grows near Tegea: of this Pandeios the sculptor ate, and went mad while he was working in the temple. Others have fatal effects, as that which grows near the mines in the fields of Thrace: this however is inoffensive and quite sweet to the taste, and the death which it causes is easy and like falling asleep. There are also differences in colour, not merely as to being black or white or yellow, but some are quite winecoloured and some are red, as the root of madder.

[13.5] The root of pentaphyllon or pentapetes (cinquefoil) (for the plant bears both names) is red when it is dug up, but as it dries it becomes black and square: its leaf is like a vine-leaf, and it is small and like it in colour: it grows and fades along with the vine. It only has five leaves in all, whence its name: it sends out long slender stems on the ground, and it has joints.

[13.6] Madder has a leaf like ivy, but it is rounder: it grows along the ground like dog's-tooth grass and loves shady spots. It has diuretic properties, wherefore it is used for pains in the loins or hip-disease.

[13.7] Some roots are of peculiar shape, as that of the plant called 'scorpion-plant' (leopard's bane) and that of polypody. For the former is like a scorpion and is also useful against the sting of that creature and for certain other purposes. The root of polypody is rough and has suckers like the tentacles of the polyp. It purges downwards: and, if one wears it as an amulet, they say that one does not get a polypus. It has a leaf like the great fern, and it grows on rocks.

[14.1] Some roots keep a longer, some a shorter time. Hellebore retains its usefulness for as much as thirty years, birthwort five or six, the black chamaeleon for forty, feverwort (whose root is thick and compact) for ten or twelve. Sulphur-wort keeps five or six years, the root of the 'wild vine' (bryony) for a year, if it be kept in the shade and not damaged: otherwise it rots and becomes spongy. Others keep for various periods. But, to speak generally, of all plants used as drugs the 'driver' keeps longest, and, the older it is, the better it is. At least a certain physician, who was no boaster nor liar, said that he had some which was 200 years old and of marvellous virtue, and that it was a present to him from some one. The cause of its keeping so long is its moisture: for to secure this, as soon as they have cut it, they put it among ashes without drying it, and not even so does it become dry, but up to fifty years it will put the lamp out if it is brought near it. And they say that alone of

all drugs, or to a greater degree than any, it effects a thorough purge upwards: this then is a virtue peculiar to it.

[14.2] Those roots which contain any sweetness become worm-eaten in course of time, but those that are pungent are not so affected, though their virtues diminish as they become flabby and waste away. No creature coming from without touches a pungent root, but the sphondyle attacks them all; this then is a peculiarity of this creature.

[14.3] Any root, they say, deteriorates if one lets the fruit grow to maturity and ripen: and so in like manner does the fruit, if you drain the root of its juice: and in general roots with medicinal properties do not have the juice of their roots taken, and only those whose seeds are medicinal are thus treated. But some say that they use the roots for choice, because the fruit is too powerful for the human body to be able to bear it. However this does not appear to be true as a universal rule, seeing that the people of Anticyra administer doses of the drug sesamodes made from hellebore, which is so called because its fruit is like sesame.

[15.1] The places outside Hellas which specially produce medicinal herbs seem to be the parts of Tyrrhenia and Latium (where they say that Circe dwelt), and still more parts of Egypt, as Homer says: for thence he says that Helen brought things of virtue which Polydamna, the Egyptian wife of Thon, gave her; there the grain-bearing earth produces most drugs, many that are good, and many baneful. Among these he says was nepenthes, the famous drug which cures sorrow and passion, so that it causes forgetfulness and indifference to ills. So these lands seem to have been pointed out, as it were, by the poets. For Aeschylus too in his elegies speaks of Tyrrhenia as rich in drugs, for he tells of the Tyrrhenian stock, a nation that makes drugs.

[15.2] It seems that almost all places take their share in producing drugs, but that they differ in the extent to which they do so; for the regions of the North, South, and East have herbs of marvellous virtue. Thus in Ethiopia there is a certain deadly root with which they smear their arrows. And in Scythia there is this and there are also others, some of which kill at once those who eat them, some after an interval, shorter or longer, so that in the latter case men have a lingering death. In India there are many other kinds, but the most extraordinary, if they tell the truth, are these: there is one which has the power to make the blood disperse and as it were to put it to flight, and another which

collects it and draws it to itself; these they say were discovered as remedies for the bites of deadly serpents.

[15.3] In Thrace it is said there are fairly numerous other kinds, but that about the most powerful is 'blood-stancher,' which stops and prevents the flow of blood, some say if the vein is merely pricked, others even if it is deeply cut into. These then of the places outside Hellas are those that are most productive of drugs.

[15.4] Of places in Hellas those most productive of drugs are Pelion in Thessaly, Telethron in Euboea, Parnassus, and also Arcadia and Laconia, for both these states produce medicinal herbs; wherefore the Arcadians are accustomed, instead of drinking medicine, to drink milk in spring when the juices of such plants are at their best, for then the milk has most medicinal virtue. It is cows' milk that they drink, since it appears that the cow eats more than any other animal and is more impartial as to what she eats.

[15.5] Both kinds of hellebore, the white and the black, grow in their country, and also carrot, a saffron coloured plant like bay, and a plant which the Arcadians call 'wild cabbage' (spurge) but some physicians kerdis; also a plant called by some marsh mallow, also birthwort, hartwort, alexanders, sulphurwort, Herakleia, and both kinds of strychnos, that which has a scarlet and that which has a black fruit.

[15.6] There also grow there the 'wild cucumber' (squirting cucumber), of which the drug 'driver' is compounded, and the tithymallos (spurge) of which hippophaes is made; this is best about Tegea, and that kind is much sought after; it grows there in considerable abundance, but in greatest abundance and best about Kleitoria.

[15.7] All-heal grows in great abundance and best in the rocky ground about Psophis, moly about Pheneos and on Mount Kyllene. They say that this plant is like the moly mentioned by Homer, that it has a round root like an onion and a leaf like squill, and that it is used against spells and magic arts, but that it is not, as Homer says, difficult to dig up.

[15.8] Hemlock is best about Susa and in the coldest spots. Most of these plants occur also in Laconia, for this too is a land rich in medicinal herbs. In Achaia tragacanth is abundant and is as good as that of Crete, it is believed, and even fairer in appearance. Daukon again is excellent in the country about Patrai; this is by nature healing, and it has a black root. Most of these grow

also on Mount Parnassus and about Telethron. So these plants are common to several lands.

[16.1] But dittany is peculiar to Crete. This plant is marvellous in virtue and is useful for many purposes, but especially for women in child-birth. Its leaf is like pennyroyal, to which it also bears some resemblance in taste; but the twigs are slenderer. They use the leaves, not the twigs nor the fruit: and the leaf is useful for many other purposes, but above all, as was said, against difficult labour in women; for it is said that either it makes labour quite easy or at least it confessedly makes the pains to cease: it is given as a draught in water. It is a scarce plant: for the region which bears it is not extensive, and the goats graze it down because they are fond of it. The story of the arrows is also said to be true, that, if goats eat it when they have been shot, it rids them of the arrow. Such then is dittany and such its properties.

[16.2] ‘False dittany’ is like it in leaf, but has smaller twigs, and in virtue is far inferior. For it is of service in the same ways, but is feebler and not nearly so powerful. The virtue of dittany is perceived directly it is taken into the mouth: for a small piece of it has a very warming effect. The bunches of it are put in the hollow stem of ferula or a reed, so that it may not exhale its virtue: for, if it does so, it is less effective. Some say that dittany and ‘false dittany’ are essentially the same plant, but that the latter is an inferior form produced by growing in places with richer soil; just as many other things become inferior in their properties for the same cause. For dittany loves rough ground.

[16.3] There is also another plant called ‘dittany,’ though it has nothing in common with these except the name. This has neither the same appearance nor the same virtue; for its leaf is like bergamot mint and its twigs are larger, and further its use and virtue are differently shewn. The true plant is, as was said, marvellous, and is also peculiar to the island of Crete. Indeed some say that the plants of Crete are superior in leaves, boughs, and in general all the parts above ground to those of other places; while those of Parnassus are superior to most of those found elsewhere.

[16.4] Wolf’s-bane grows in Crete and in Zakynthos, but is most abundant and best at Herakleia in Pontus. It has a leaf like chicory, a root like in shape and colour to a prawn, and in this root resides its deadly property, whereas they say that the leaf and the fruit produce no effects. The fruit is that of a herb, not that of a shrub or tree. It is a lowgrowing herb and shows no special

feature, but is like corn, except that the seed is not in an ear. It grows everywhere and not only at Akonai, from whence it gets its name (this is a village of the Mariandynoi): and it specially likes rocky ground. Neither sheep nor any other animals eat it. In order to be effective it is said that it must be compounded in a certain manner, and that not everyone can do this: and so that physicians, not knowing how to compound it, use it as a septic and for other purposes: and that, if drunk mixed in wine or a honey-posset, it produces no sensation: but that it can be so compounded as to prove fatal at a certain moment which may be in two three or six months, or in a year, or even in two years: and that the longer the time the more painful the death, since the body then wastes away, while, if it acts at once, death is quite painless. And it is said that no antidote which can counteract it has been discovered, like the natural antidotes to other poisonous herbs of which we are told: though the country-folk can sometimes save a man with honey and wine and such like things, only however occasionally and with difficulty.

[16.5] (On the other hand they say that for meadow saffron the antidote has been found: for that there is another root which counteracts that herb: and that it has a leaf like hellebore or the madonna lily: and that this is generally known. Wherefore they say that slaves often take meadow-saffron when greatly provoked, and then themselves have recourse to the antidote and effect a cure, seeing that the poison does not cause a speedy and easy death, but one that is lingering and slow, unless indeed, merely because the cure is so easy, the antidote has not been properly prepared. At least they say that though death may ensue at once, sometimes it only occurs after a considerable interval, which in some cases extends to a year, and that in these latter cases the dose given has incurable effects: and that these facts have been most carefully ascertained among the Tyrrhenians of Herakleia. Now it is not surprising that in some circumstances the effects of the poison should be incurable, and yet in others that a cure should be possible, this being also the case with other deadly poisons.)

[16.6] To return, wolf's-bane, as has been said, is useless to those who do not understand it; in fact it is said that it is not lawful even to have it in one's possession, under pain of death; also that the length of time which it takes to produce its effects depends on the time when it is gathered; for that the time which it takes to kill is equal to that which has elapsed since it was gathered.

[16.7] Thrasyas of Mantinea had discovered, as he said, a poison which produces an easy and painless end; he used the juices of hemlock poppy and other such herbs, so compounded as to make a dose of conveniently small size, weighing only somewhat less than a quarter of an ounce. For the effects of this compound there is absolutely no cure, and it will keep any length of time without losing its virtue at all. He used to gather his hemlock, not just anywhere, but at Susa or some other cold and shady spot; and so too with the other ingredients; he also used to compound many other poisons, using many ingredients. His pupil Alexias was also clever and no less skilful than his master, being also versed in the science of medicine generally.

[16.8] Now these things seem to have been ascertained far better in recent than in former times. And many things go to shew that the method of using the various drugs makes a difference; thus the people of Ceos formerly did not use hemlock in the way described, but just shredded it up for use, as did other people; but now not one of them would think of shredding it, but they first strip off the outside and take off the husk, since this is what causes the difficulty, as it is not easily assimilated; then they bruise it in the mortar, and, after putting it through a fine sieve, sprinkle it on water and so drink it; and then death is made swift and easy.

[17.1] The virtues of all drugs become weaker to those who are accustomed to them, and in some cases become entirely ineffective. Thus some eat enough hellebore to consume whole bundles and yet suffer no hurt; this is what Thrasyas did, who, as it appeared, was very cunning in the use of herbs. And it appears that shepherds sometimes do the like; wherefore the shepherd who came before the vendor of drugs (at whom men marvelled because he ate one or two roots) and himself consumed the whole bundle, destroyed the vendor's reputation: it was said that both this man and others did this every day.

[17.2] For it seems that some poisons become poisonous because they are unfamiliar, or perhaps it is a more accurate way of putting it to say that familiarity makes poisons non-poisonous; for, when the constitution has accepted them and prevails over them, they cease to be poisons, as Thrasyas also remarked; for he said that the same thing was a poison to one and not to another; thus he distinguished between different constitutions, as he thought was right; and he was clever at observing the differences. Also, besides the constitution, it is plain that use has something to do with it. At least Eudemus,

the vendor of drugs, who had a high reputation in his business, after making a wager that he would experience no effect before sunset, drank a quite moderate dose, and it proved too strong for his power of resistance: while the Chian Eudemus took a draught of hellebore and was not purged. And on one occasion he said that in a single day he took two and twenty draughts in the market-place as he sat at his stall, and did not leave the place till it was evening, and then he went home and had a bath and dined, and was not sick. However this man was able to hold out because he had provided himself with an antidote; for he said that after the seventh dose he took a draught of tart vinegar with pumice-stone dust in it, and later on took a draught of the same in wine in like manner; and that the virtue of the pumice-stone dust is so great that, if one puts it into a boiling pot of wine, it causes it to cease to boil, not merely for the moment, but altogether, clearly because it has a drying effect and it catches the vapour and passes it off. It was then by this antidote that Eudemus was able to contain himself in spite of the large quantity of hellebore which he took.

[17.3] However many things go to show that use makes much difference; thus some say that the sheep of some places do not eat wormwood; yet those of Pontus not only eat it but become fatter and fairer and, as some say, have no bile. But these things may be said to belong to a different enquiry.

[18.1] Herbs and shrubs, as has been said, have many virtues which are shown in their effects not only on living bodies but on lifeless ones. Thus they say that there is a kind of *akantha* (gum arabic) which thickens water, when it is put in it; and that so also does the root of marsh-mallow if one shreds it and puts it in and stands the water in the open air. Marsh-mallow has a leaf like mallow, but larger and rougher; the stems are soft, the flower yellow, the fruit like that of mallow, the root fibrous and white, with a taste like that of the stem of mallow. They use it for fractures and for coughs in sweet wine, and for sores in olive-oil.

[18.2] They say that there is another kind which, if cooked with meat, combines with it and as it were sets it hard; and there are others that attract things to them, like the magnet or amber. So much for effects produced on lifeless things.

[18.3] Wolf's bane, which some call 'scorpion-plant' because it has a root like a scorpion, kills that animal if it is shredded over him; while if one then

sprinkles him with white hellebore, they say that he comes to life again. It is also fatal to oxen, sheep, beasts of burden and in general to any fourfooted animal, and kills them the same day if the root or leaf is put on the genitals; and it is also useful as a draught against a scorpion's sting. It has a leaf like cyclamen, and a root, as was said, like a scorpion. It grows like dog's-tooth grass, and is jointed, and it loves shady places. Now if what has been told already about the scorpion be true, then other similar tales are not incredible. (Indeed fabulous tales are not composed without some reason). And in relation to our own persons, apart from their effects in regard to health disease and death, it is said that herbs have also other properties affecting not only the bodily but also the mental powers.

[19.1] As to those which affect the mind, strychnos, as was said before, is said to upset the mental powers and make one mad; while the root of onotheras (oleander) administered in wine makes the temper gentler and more cheerful. This plant has a leaf like the almond, but smaller, and the flower is red like a rose. The plant itself (which loves hilly country) forms a large bush; the root is red and large, and, if this is dried, it gives off a fragrance like wine. And this does not seem surprising, since there is a sort of 'bouquet' given off by a thing which has the peculiar quality of wine.

[19.2] On the other hand what is said of amulets and charms in general for the body or the house is somewhat foolish and incredible. Thus they say that tripolion according to Hesiod and Musaeus is useful for every good purpose, wherefore they dig it up by night, camping on the spot. So too what is said of good or fair fame as affected by plants is quite as foolish or more so: for they say that the plant called snapdragon produces fair fame. This plant is like bedstraw but it has no root: and the fruit has what resembles a calf's nostrils. The man who anoints himself with this they say wins fair fame. And they say that the same result follows, if he crowns himself with the flower of gold-flower, sprinkling it with unguent from a vessel of unfired gold. The flower of gold-flower is like gold, the leaf is white. The stem also is white and hard, the root is slender and does not run deep. Men use it in wine against the bites of serpents, and to make a plaster for burns after burning it and mixing the ashes with honey. Such tales then, as was said before, proceed from men who desire to glorify their own crafts.

[19.3] Now since the natural qualities of roots, fruits and juices have many

virtues of all sorts, some having the same virtue and causing the same result, while others have opposite virtues, one might raise a question which is perhaps equally perplexing in regard to other matters, to wit, whether those that produce the same effect do so in virtue of some single virtue which is common to them all, or whether the same result may not come about also from different causes. Let us be content to put the question thus: but now we must proceed to speak of the natural qualities or virtues of any other plants that we can mention.

[20.1] Pepper is a fruit, and there are two kinds: one is round like bitter vetch, having a case and flesh like the berries of bay, and it is reddish: the other is elongated and black and has seeds like those of poppy: and this kind is much stronger than the other. Both however are heating: wherefore these, as well as frankincense, are used as antidotes for poisoning by hemlock.

[20.2] The 'Cnidian berry' is round, red in colour, larger than that of pepper, and far stronger in its heating power; wherefore, when it is given as a pill (for it is given to open the bowels) they knead it up in a piece of bread or dough: otherwise it burns the throat.

[20.3] The root of sulphur-wort is also heating, wherefore they make of it an ointment to produce a sweat, as with other things so used. This root is also given for the spleen: but neither its seed nor its juice is of use: it grows in Arcadia. Daukon of excellent quality grows in the district of Patrai in Achaia, and is heating by nature: it has a black root.

[20.4] The root of the 'wild vine' (bryony) is also heating and pungent: wherefore it is useful as a depilatory and to remove freckles: and the fruit is used for smoothing hides. It is cut at any season, but especially in autumn. The root of edderwort given in milk is useful for stopping a cough. It has a variegated snake-like stem: the seed is not used.

[20.5] The root of thapsia has emetic properties: and, if one retains it, it purges both upwards and downwards. It is also able to remove bruises: and it restores other contusions to a pale colour. Its juice is stronger and purges both upwards and downwards: the seed is riot used. It grows especially in Attica, but also in other places: the cattle of the country do not touch it, but imported cattle feed on it and perish of diarrhoea. Polypody springs up after rain, and produces no seed.

[20.6] The wood of ebony is in appearance like box, but when barked it

becomes black: it is useful against ophthalmia, and is rubbed on a whetstone for that use. Birthwort is a stout plant and is bitter to the taste: it is black in colour and fragrant; the leaf is round. However there is not much of the plant above ground. It grows especially on mountains, and then it is best. Many uses of it for various purposes are enumerated; it is best for bruises on the head, good also for other wounds, against snake-bites, to produce sleep, for the womb as a pessary: for some purposes it is soaked with water and applied as a plaster, for others it is scraped into honey and olive oil: against snake-bites it is drunk in sour wine and also sprinkled over the bite; to induce sleep it is given pounded up in black dry wine: in cases of prolapsed uterus it is used in water as a lotion. This plant then seems to have a surpassing variety of usefulness.

[20.7] Of scammony, as though by contrast, only the juice is useful and no other part. Of male-fern no part but the root is useful and it has a sweet astringent taste. It expels the flat worm. It has no seed nor juice: and they say it is ripe for cutting in autumn. (This worm naturally infests certain races: speaking generally the following are liable to it the Egyptians, the Arabians, the Armenians, the Matadides, the Syrians, the Cilicians: the Thracians have it not, nor the Phrygians. Among the Hellenes those Thebans who frequent wrestling-schools and the Boeotians generally are liable to it: but not the Athenians.) Of all drugs, to speak generally, those are better which come from places that are wintry, face the north and are dry: wherefore of those which grow in Euboea best, they say, are the drugs of Aigai or Telethrion, these places being dry, while Telethrion is also shady.

[20.8] Thus we have spoken of drugs, those that are medicinal and those that have virtues of whatsoever kind, whether in the root itself, or in the juice, or in any other of their parts, and in general of all the shrubby or herbaceous plants which have such virtues, as well as their tastes, whether they be fragrant or without fragrance, with the differences between them, which are equally part of their essential character.

On Characters



Translated by R. C. Jebb

Regarded by some as spurious, Theophrastus' book on *Characters* comprises thirty brief, vigorous and incisive outlines of moral types, presenting an invaluable portrait of the life of his time and human nature in general. These sketches are the first recorded attempt at systematic character writing. Each fictional description presents a character that is dominated by a single fault, such as arrogance, boorishness or superstition. The text has been regarded by some as an independent work; others incline to the view that the sketches were written from time to time by Theophrastus, and collected and edited after his death. Theophrastus has found many imitators in this kind of writing, notably Joseph Hall (1608), Sir Thomas Overbury (1614–16), Bishop Earle (1628), and Jean de La Bruyère (1688), who also translated the *Characters*. Interestingly, George Eliot took inspiration from *Characters*, most notably in her book of caricatures, *Impressions of Theophrastus Such*. Writing the “character sketch” as a scholastic exercise also originated in Theophrastus' typology.

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Proem

Often before now have I applied my thoughts to the puzzling question — one, probably, which will puzzle me for ever — why it is that, while all Greece lies under the same sky and all the Greeks are educated alike, it has befallen us to have characters so variously constituted. For a long time, Polycles, I have been a student of human nature; I have lived ninety years and nine; I have associated, too, with many and diverse natures; and, having observed side by side, with great closeness, both the good and the worthless among men, I conceived that I ought to write a book about the practices in life of either sort.

I will describe to you, class by class, the several kinds of conduct which characterise them and the mode in which they administer their affairs; for I conceive, Polycles, that our sons will be the better if such memorials are bequeathed to them, using which as examples they shall choose to live and consort with men of the fairest lives, in order that they may not fall short of them.

And now I will turn to my narrative; be it your part to come along with it and to see if I speak rightly. In the first place, then, I will commence my account with those who have studied Irony, dispensing with preface or many words about the matter. I will begin with Irony and define it; next I will set forth, in like manner, the nature of the Ironical man, and of the character into which he has drifted; and then I will try, as I proposed, to make the other affections of the mind plain, each after its kind.

I. The Ironical Man

Irony, roughly defined, would seem to be an affectation of the worse in word or deed.

The Ironical Man is one who goes up to his enemies, and volunteers to chat with them, instead of showing hatred. He will praise to their faces those whom he attacked behind their backs, and will sympathise with them in their defeats. He will show forgiveness to his revilers, and excuse things said against him; and he will talk blandly to persons who are smarting under a wrong. When people wish to seem him in a hurry, he will desire them to call again. He will never confess to anything that he is doing, but will always just say that he is thinking about it. He will pretend that he has ‘just arrived,’ or that he ‘was too late,’ or that he ‘was unwell.’ To applicants for a loan or a subscription he will say that he has no money; when he has anything for sale, he will deny that he means to sell; or, when he does *not* mean to sell, he will pretend that he does. Hearing, he will affect not to have heard, seeing, not to have seen; if he has made an admission, he will say that he does not remember it. Sometimes he has ‘been considering the question’; sometimes he does ‘not know’; sometimes he is ‘surprised’; sometimes it is ‘the very conclusion’ at which he ‘once arrived’ himself. And, in general, he is very apt to use this kind of phrase: ‘I do not believe it’; ‘I do not understand it’; ‘I am astonished.’ Or he will say that he has heard it from some one else: ‘This, however, was not the story that he told me.’ ‘The thing surprises me’; ‘Don’t tell *me*’; ‘I do not know how I am to disbelieve you, or to condemn him’; ‘Take care that you are not too credulous.’

[Such the speeches, such the doublings and retractions to which the Ironical man will resort. Disingenuous and designing characters are in truth to be shunned more carefully than vipers.]

II. The Flatterer

Flattery may be considered as a mode of companionship degrading but profitable to him who flatters.

The Flatterer is a person who will say as he walks with another, 'Do you observe how people are looking at you? This happens to no man in Athens but you. A compliment was paid to you yesterday at the Stoa. More than thirty persons were sitting there; the question was started, Who is our foremost man? Everyone mentioned you first, and ended by coming back to your name.' With these and the like words, he will remove a morsel of wool from his patron's coat; or, if a speck of chaff has been laid on the other's hair by the wind, he will pick it off; adding with a laugh, 'Do you see? Because I have not met you for two days, you have had your beard full of white hairs; although no one has darker hair for his years than you.' Then he will request the company to be silent while the great man is speaking, and will praise him, too, in his hearing, and mark his approbation at a pause with 'True'; or he will laugh at a frigid joke, and stuff his cloak into his mouth as if he could not repress his amusement. He will request those whom he meets to stand still until 'his Honour' has passed. He will buy apples and pears, and bring them in and give them to the children in the father's presence; adding, with kisses, 'Chicks of a good father.' Also, when he assists at the purchase of slippers, he will declare that the foot is more shapely than the shoe. If his patron is approaching a friend, he will run forward and say, 'He is coming to you'; and then, turning back, 'I have announced you.' He is just the person, too, who can run errands to the women's market without drawing breath. He is the first of the guests to praise the wine; and to say, as he reclines next the host, 'How delicate is your fare!' and (taking up something from the table) 'Now this — how excellent it is!' He will ask his friend if he is cold, and if he would like something more; and, before the words are spoken, will wrap him up. Moreover he will lean towards his ear and whisper with him; or will glance at him as he talks to the rest of the company. He will take the cushions from the slave in the theatre, and spread them on the seat with his own hands. He will say that his patron's house is well built, that his land is well planted, and that his portrait is like.

[In short the Flatterer may be observed saying and doing all things by

which he conceives that he will gain favour.]

III. The Garrulous Man

Garrulity is the discoursing of much and ill-considered talk.

The Garrulous Man is one who will sit down beside a person whom he does not know, and first pronounce a panegyric on his own wife; then relate his dream of last night; then go through in detail what he has had for dinner. Then, warming to the work, he will remark that the men of the present day are greatly inferior to the ancients; and how cheap wheat has become in the market; and what a number of foreigners are in town; and that the sea is navigable after the Dionysia; and that, if Zeus would send more rain, the crops would be better; and that he will work his land next year; and how hard it is to live; and that Damippus set up a very large torch at the Mysteries; and ‘How many columns has the Odeum?’ and that yesterday he was unwell; and ‘What is the day of the month?’; and that the Mysteries are in Boëdromion, the Apaturia in Pyanepsion, the rural Dionysia in Poseideon. Nor, if he is tolerated, will he ever desist.

[He who would not have a fever must shake off such persons, and thrust them aside, and make his escape. It is hard to bear with those who cannot discern between the time to trifle and the time to work.]

IV. The Boor

Boorishness would seem to be ignorance offending against propriety.

The Boor is one who, having drunk a posset, will go into the Ecclesia. He vows that thyme smells sweeter than any perfume; he wears his shoes too large for his feet; he talks in a loud voice. He distrusts his friends and relatives, but talks confidentially to his own servants on the most important matters; and recounts all the news from the Ecclesia to the hired labourers working on his land. Wearing a cloak which does not reach the knee, he will sit down. He shows surprise and wonder at nothing else, but will stand still and gaze when he sees an ox or an ass or a goat in the streets. He is apt also to take things out of the store-room and eat them; and to drink his wine rather strong. He will help the bakery-maid to grind the corn for the use of the household and for his own; he will eat his breakfast while he shakes down hay for his beasts of burden; he will answer a knock at the door himself, and call the dog to him, and take hold of his nose, saying 'This fellow looks after the place and the house.' When he is given a piece of money, he will reject it, saying that it is too smooth, and thereupon will take another instead; and, if he has lent his plough, or a basket or sickle or bag, and remembers it as he lies awake, he will ask it back in the middle of the night. On his way down to Athens he will ask the first man that he meets how hides and salt-fish were selling, and whether the archon celebrates the New Moon to-day; adding immediately that he means to have his hair cut when he gets to town, and at the same visit to bring some salt-fish from Archias as he goes by. He will also sing at the bath; and will drive nails into his shoes.

V. The Complaisant Man

Complaisance may be defined as a mode of address calculated to give pleasure, but not with the best tendency.

The Complaisant man is very much the kind of person who will hail one afar off with 'my dear fellow'; and, after a large display of respect, seize and hold one by both hands. He will attend you a little way, and ask *when* he is to see you, and will take his leave with a compliment upon his lips. Also, when he is called in to an arbitration, he will seek to please, not only his principal, but the adversary as well, in order that he may be deemed impartial. He will say, too, that foreigners peak more justly than his fellow-citizens. Then, when he is asked to dinner, he will request the host to send for the children; and will say of them, when they come in, that they are as like their father as figs; and will draw them towards him, and kiss them, and establish them at his side, — playing with some of them, and himself saying 'Wineskin,' and 'Hatchet,' and permitting others to got to sleep upon him, to his anguish.

VI. The Reckless Man

Recklessness is tolerance of shame in word and deed.

The Reckless man is one who will lightly take an oath, being proof against abuse, and capable of giving it; in character a coarse fellow, defiant of decency, ready to do anything; just the person to dance the cordax, sober and without a mask, in a comic chorus. At a conjuror's performance, too, he will collect the copper coins, going along from man to man, and wrangling with those who have the free-pass, and claim to see the show for nothing. He is apt, also, to become an inn-keeper or a tax-farmer; he will decline no sort of disreputable trade, a crier's, a cook's; he will gamble, and neglect to maintain his mother; he will be arrested for theft, and spend more time in prison than in his own house.

And he would seem, too, to be one of these persons who collect and call crowds about them, ranting in a loud cracked voice and haranguing them; meanwhile some will approach, and others go away without hearing him out; but to some he gives the first chapter of his story, to others and epitome, to others a fragment; and the time which he chooses for parading his recklessness is always when there is some public gathering. Great is he, too, in lawsuits, now as defendant, now as prosecutor; sometimes excusing himself on oath, sometimes attending the court with a box of papers in the breast of his cloak and satchels of note-books in his hands. He will not disdain either to be a captain of market-place hucksters, but will readily lend them money, exacting, as interest upon a drachma, three obols a day; and will make the round of the cook-shops, the fishmongers, the fish-picklers, thrusting into his cheek the interest which he levies on their gains.

[These are troublesome persons, for their tongues are easily set wagging abusively; and they talk in so loud a voice that the market-place and the workshops resound with them.]

VII. The Chatty Man

Chattiness, if one should wish to define it, would seem to be an incontinence of talk.

The Chatty Man is one who will say to those whom he meets, if they speak a word to him, that they are quite wrong, and that *he* knows all about it, and that, if they listen to him, they will learn; then, while one is answering him, he will put in, ‘Do you tell me so? — don’t forget what you are going to say’; or ‘Thanks for reminding me’; or ‘How much one gets from a little talk, to be sure!’ or ‘By-the-bye’ — ; or ‘Yes! you have seen it in a moment’; or ‘I have been watching you all along to see if you would come to the same conclusion as I did’; and other such cues will he make for himself, so that his victim has not even breathing-time. Aye, and when he has prostrated a few lonely stragglers, he is apt to march next upon large, compact bodies, and to rout them in the midst of their occupations. Indeed, he will go into the schools and the palaestras, and hinder the boys from getting on with their lessons, by chattering at this rate to their trainers and masters. When people say that they are going, he loves to escort them, and to seem them safe into their houses. On learning the news from the Ecclesia, he hastens to report it; and to relate, in addition, the old story of the battle in Aristophon [the orator]’s year, and of the Lacedaemonian victory in Lysander’s time; also of the speech for which he himself once got glory in the Assembly; and he will throw in some abuse of ‘the masses,’ too, in the course of his narrative; so that the hearers will either forget what it was about, or fall into a doze, or desert him in the middle and make their escape. Then, on a jury, he will hinder his fellows from coming to a verdict, at a theatre from seeing the play, at a dinner-party, from eating; saying that ‘it is hard for a chatterer to be silent,’ and that his tongue *will* run, and that he could not hold it, though he should be thought a greater chatterer than a swallow. Nay, he will endure to be the butt of his own children, when, drowsy at last, they make their request to him in these terms— ‘Papa, chatter to us, that we may fall asleep!’

VIII. The Gossip

Gossip is the framing of fictitious saying and doings at the pleasure of him who gossips.

The Gossip is a person who, when he meets his friend, will assume a demure air, and ask with a smile— ‘Where are *you* from, and what are your tidings? What news have you to give me about this affair?’ And then he will reiterate the question— ‘Is anything fresh rumoured? Well certainly these are glorious tidings!’ Then, without allowing the other to answer, he will go on— ‘What say you? You have heard nothing? I flatter myself that I can treat you to some news’; and he has a soldier, or a slave of Asteius the fluteplayer, or Lycon the contractor, just arrived from the field of battle, from whom he says that he has heard of it. In fact the authorities for his statements are always such that no one can possibly lay hold upon them. Quoting these, he relates how Polyperchon and the king have won the battle, and Cassander has been taken alive; and, if anyone says to him, ‘But do you believe this?’— ‘Why,’ he will answer, ‘the town rings with it! The report grows firmer and firmer — everyone is agreed — they all give the same account of the battle’; adding that the hash has been dreadful; and that he can tell it, too, from the faces of Government — he observes that they have all changed countenance. He speaks also of having heard privately that the authorities have a man hid in a house who came just five days ago from Macedonia, and who knows it all. And in narrating all this — only think! — he will be plausibly pathetic, saying ‘Unlucky Cassander! Poor fellow! Do you see what fortune is? Well, well, he was a strong man once...’: adding ‘No one but you must know this’ — when he has run up to everybody in town with the news.

[It is a standing puzzle to me what object these men can have in their inventions; for, besides telling falsehoods, they incur positive loss. Often have cloaks been lost by those of them who draw groups round them at the baths; often has judgment gone by default against those who were winning battles or seafights in the Stoa; and some there are who, while mounting the imaginary breach, have missed their dinner. Their manner of life is indeed most miserable. What porch is there, what workshop, what part of the market-place which they do not haunt all day long, exhausting the patience of their hearers in this way, and wearying them to death with their fictions?]

IX. The Shameless Man

Shamelessness may be defined as neglect of reputation for the sake of base gain.

The Shameless man is one who, in the first place, will and borrow from the creditor whose money he is withholding. Then, when he has been sacrificing to the gods, he will put away the salted remains, and will himself dine out; and, calling up his attendant, will give him bread and meat taken from the table, saying in the hearing of all, 'Feast, most worshipful.' In marketing, again, he will remind the butcher of any service which he may have rendered him; and, standing near the scales, will throw in some meat, if he can, or else a bone for his soup; if he gets it, it is well; if not, he will snatch up a piece of tripe from the counter, and go off laughing. Again, when he has taken places at the theatre for his foreign visitors, he will see the performance without paying his own share; and will bring his sons, too, and their attendants the next day. When anyone secures a good bargain, he will ask to be given part in it. He will go to another man's house and borrow barley, or sometimes bran; and moreover will insist upon the lenders delivering it at his door. He is apt, also, to go up to the coppers in the baths, — to plunge the ladle in, amid the cries of the bath-man, — and to souse himself; saying that he has had his bath, and then, as he departs,— 'No thanks to you!'

X. The Penurious Man

Penuriousness is too strict attention to profit and loss.

The Penurious man is one who, while the month is current, will come to one's house and ask for a half-obol. When he is at table with others, he will count how many cups each of them has drunk; and will pour a smaller libation to Artemis than any of the company. Whenever a person has made a good bargain for him and charges him with it, he will say that it is too dear. When a servant has broken a jug or a plate, he will take the value out of his rations; or, if his wife has dropped a triple-copper coin, he is capable of moving the furniture and the sofas and the wardrobes, and of rummaging in the curtains. If he has anything to sell, he will dispose of it at such a price that the buyer shall have no profit. He is not likely to let one eat a fig from his garden, or walk through his land, or pick up one of the olives or dates that lie on the ground; and he will inspect his boundaries day by day to see if they remain the same. He is apt, also, to enforce the right of distraining, and to exact compound interest. When he feasts the men of his deme, the cutlets set before them will be small; when he markets, he will come in having bought nothing. And he will forbid his wife to lend salt, or a lamp-wick, or cumin, or verjuice, or meal for sacrifice, or garlands, or cakes; saying that these trifles come to much in the year. Then, in general, it may be noticed that the money-boxes of the penurious are mouldy, and the keys rusty; that they themselves wear their cloaks scarcely reaching to the thigh; that they anoint themselves with very small oil-flasks; that they have their hair cut close; that they take off their shoes in the middle of the day; and that they are urgent with the fuller to let their cloak have plenty of earth, in order that it may not soon be soiled.

XI. The Gross Man

Grossness is not difficult to define; it is obtrusive and objectionable pleasantry.

The Gross man is one who will insult freeborn women; who, in a theatre, will applaud when others cease, and hiss the actors who please the rest of the spectators. When the market-place is full, he will go up to the place where nuts or myrtleberries or fruits are sold, and stand munching while he chatters to the seller. Then he will call by name to a passer-by with whom he is not familiar; or, if he chance to see persons in a hurry, he will cry 'stop' or he will go up to a man who has lost a great lawsuit and is leaving the court, and will congratulate him. He will do his own marketing, and hire flute-players; moreover, he will show to everyone who meets him the provisions that he has bought, with an invitation to come and eat them; and will explain, as he stands at the door of a barber's or perfumer's shop, that he means to get drunk. His mother having gone out to the soothsayer's, he will use words of evil omen; or, when people are praying and pouring libations, he will drop his cup, and laugh as if he had done something clever. Also, when the flute is being played to him, he alone of all the company will beat time with his hands, and trill an accompaniment; and will reprove the player, asking why she did not stop sooner. And, when he desires to spit, he will spit across the table at the cup-bearer.

XII. The Unseasonable Man

Unseasonableness consists in a chance meeting disagreeable to those who meet.

The Unseasonable man is one who will go up to a busy person, and open his heart to him. He will serenade his mistress when she has a fever. He will address himself to a man who has been cast in a surety-suit, and request him to become his security. He will come to give evidence when the trial is over. When he is asked to a wedding, he will inveigh against womankind. He will propose a walk to those who have just come off a long journey. He has a knack, also, of bringing a higher bidder to him who has already found his market. He loves to rise and go through a long story to those who have heard it and know it by heart; he is zealous, too, in charging himself with offices which one would rather not have done, but is ashamed to decline. When people are sacrificing and incurring expense, he will come to demand his interest. If he is present at the flogging of a slave, he will relate how a slave of his own was once beaten in the same way — and hanged himself; or, assisting at an arbitration, he will persist in embroiling the parties when they both wish to be reconciled. And, when he is minded to dance, he will seize upon another person who is not yet drunk.

XIII. The Officious Man

Officiousness would seem to be, in fact, a well-meaning presumption in word or deed.

The Officious man is one who will rise and promise things beyond his power; and who, when an arrangement is admitted to be just, will oppose it, and be refuted. He will insist, too, on the slave mixing more wine than the company can finish; he will separate combatants, even those whom he does not know; he will undertake to show the path, and after all be unable to find his way. Also he will go up to his commanding officer, and ask when he means to give battle, and what is to be his order for the day after tomorrow. When the doctor forbids him to give wine to an invalid, he will say that he wishes to try an experiment, and will drench the sick man. Also he will inscribe upon a deceased woman's tombstone the name of her husband, of her father, and of her mother, as well as her own, with the place of her birth; recording further that 'All these were Estimable Persons.' And when he is about to take an oath he will say to the bystanders, 'This is by no means the first that I have undertaken.'

XIV. The Stupid Man

Stupidity may be defined as mental slowness in speech and action.

The Stupid man is one who, after doing a sum and setting down the total, will ask the person sitting next to him 'What does it come to?' When he is defendant in an action, and it is about to come on, he will forget it and go into the country; when he is a spectator in the theatre, he will be left behind slumbering in solitude. If he has been given anything, and has put it away himself, he will look for it and be unable to find it. When the death of a friend is announced to him, in order that he may come to the house, his face will grow dark — tears will come into his eyes — and he will say 'Heaven be praised!' He is apt, too, when he receives payment for a debt, to call witnesses; and in winter-time to quarrel with his slave for not having bought cucumbers; and to make his children wrestle and run races until he has exhausted them. If he is cooking a leek himself in the country, he will put salt into the pot twice, and make it uneatable. When it is raining, he will observe 'Well, the smell from the sky is delicious' (when others of course say 'from the earth'); or, if he is asked 'How many corpses do you suppose have been carried out at the Sacred Gate?' he will reply, 'I only wish that you or I had as many.'

XV. The Surly Man

Surliness is discourtesy in words.

The Surly man is one who, when asked where so-and-so is, will say, 'Don't bother me'; or, when spoken to, will not reply. If he has anything for sale, instead of informing the buyers at what price he is prepared to sell it, he will ask them what he is to get for it. Those who send him presents with their compliments at feast-tide are told that he 'will not touch' their offerings. He cannot forgive a person who has besmirched him by accident, or pushed him, or trodden upon his foot. Then, if a friend asks him for a subscription, he will say that he cannot give one; but will come with it by and by, and remark that he is losing this money also. When he stumbles in the street he is apt to swear at the stone. He will not endure to wait long for anyone; nor will he consent to sing, or to recite, or to dance. He is apt also not to pray to the gods.

XVI. The Superstitious Man

Superstition would seem to be simply cowardice in regard to the supernatural.

The Superstitious man is one who will wash his hands at a fountain, sprinkle himself from a temple-font, put a bit of laurel-leaf into his mouth, and so go about the day. If a weasel run across his path, he will not pursue his walk until someone else has traversed the road, or until he has thrown three stones across it. When he sees a serpent in his house, if it be the red snake, he will invoke Sabazius, — if the sacred snake, he will straightway place a shrine on the spot. He will pour oil from his flask on the smooth stones at the cross-roads, as he goes by, and will fall on his knees and worship them before he departs. If a mouse gnaws through a meal-bag, he will go to the expounder of sacred law and ask what is to be done; and, if the answer is, ‘give it to a cobbler to stitch up,’ he will disregard the counsel, and go his way, and expiate the omen by sacrifice. He is apt, also, to purify his house frequently, alleging that Hecate has been brought into it by spells; and, if an owl is startled by him in his walk, he will exclaim ‘Glory be to Athene!’ before he proceeds. He will not tread upon a tombstone, or come near a dead body or a woman defiled by childbirth, saying that it is expedient for him not to be polluted. Also on the fourth and seventh days of each month he will order his servants to mull wine, and go out and buy myrtle-wreaths, frankincense, and smilax; and, on coming in, will spend the day in crowning the Hermaphrodites. When he has seen a vision, he will go to the interpreters of dreams, the seers, the augurs, to ask them to what god or goddess he ought to pray. Every month he will repair to the priests of the Orphic Mysteries, to partake in their rites, accompanied by his wife, or (if she is too busy) by his children and their nurse. He would seem, too, to be of those who are scrupulous in sprinkling themselves with sea-water; and, if ever he observes anyone feasting on the garlic at the cross-roads, he will go away, pour water over his head, and, summoning the priestesses, bid them carry a squill or a puppy around him for purification. And, if he sees a maniac or an epileptic man, he will shudder and spit into his bosom.

XVII. The Grumbler

Grumbling is undue censure of one's portion.

The Grumbler is one who, when his friend has sent him a present from his table, will say to the bearer, 'You grudged me my soup and my poor wine, or you would have asked me to dinner.' He will annoyed with Zeus, not for not raining, but for raining too late; and, if he finds a purse on the road, 'Ah,' he will say, 'but I have never found a treasure!' When he has bought a slave cheap after much coaxing of the seller, 'It is strange,' he will remark, 'if I have got a sound lot such a bargain.' To one who brings him good news, 'A son is born to you,' he will reply, 'If you add that I have lost half my property, you will speak the truth.' When he has won a lawsuit by a unanimous verdict, he will find fault with the composer of his speech for having left out several points in his case. If a subscription has been raised for him by his friends, and someone says to him 'Cheer up!'— 'Cheer up?' he will answer; 'when I have to refund his money to every man, and to be grateful besides, as if I had been done a service!'

XVIII. The Distrustful Man

Distrustfulness is a presumption that all men are unjust.

The Distrustful man is one who, having sent his slave to market, will send another to ascertain what price he gave. He will carry his money himself, and sit down every two-hundred yards to count it. He will ask his wife in bed if she has locked the wardrobe, and if the cupboard has been sealed, and the bolt put upon the hall-door; and, if the reply is 'Yes,' not the less will he forsake the blankets, and light the lamp and run about shirtless and shoeless to inspect all these matters, and barely thus find sleep. He will demand his interest from his creditors in the presence of witnesses, to prevent the possibility of their repudiating the debt. He is apt also to send his cloak to be cleaned, not to the best workman, but wherever he finds sterling security for the fuller. When anyone comes to ask the loan of cups, he will, if possible, refuse; but, if perchance it is an intimate friend or relation, he will almost assay the cups in the fire, and weigh them, and do everything but take security, before he lends them. Also he will order his slave, when he attends him, to walk in front and not behind, as a precaution against his running away in the street. To persons who have bought something of him and say, 'How much is it? Enter it in your books, for I am too busy to send the money yet,' — he will reply: 'Do not trouble yourself; if you are not at leisure, I will accompany you.'

XIX. The Offensive Man

Offensiveness is distressing neglect of person.

The Offensive man is one who will go about with a scrofulous or leprous affection, or with his nails overgrown, and say that these are hereditary complaints with him; his father had them, and his grandfather, and it is not easy to be smuggled into *his* family ... He will use rancid oil to anoint himself at the bath; and will go forth into the market-place wearing a thick tunic, and a very light cloak, covered with stains.

XX. The Unpleasant Man

Unpleasantness may be defined as a mode of address which gives harmless annoyance.

The Unpleasant man is one who will come in an awake a person who has just gone to sleep, in order to chat with him. He will detain people who are on the very point of sailing; indeed he will go up to them and request them to wait until he has taken a stroll. He will take his child from the nurse, and feed it from his own mouth, and chirp endearments to it, calling it 'papa's little rascal.' He is apt, also, to ask before his relations, 'Tell me, Mommy, — when you were bringing me into the world, how went the time?' He will say that he has cool cistern-water at his house, and a garden with many fine vegetables, and a cook who understands dressed dishes. His house, he will say, is a perfect inn — always crammed; and his friends are like the pierced cask — he can never fill them with his benefits. Also, when he entertains, he will show off the qualities of his parasite to his guest; and will say, too, in an encouraging tone over the wine, that the amusement of the company has been provided for.

XXI. The Man of Petty Ambition

Petty ambition would seem to be a mean craving for distinction.

The man of Petty Ambition is one who, when asked to dinner, will be anxious to be placed next to the host at table. He will take his son away to Delphi to have his hair cut. He will be careful, too, that his attendant shall be an Aethiopian: and, when he pays a mina, he will case the slave to pay the sum in new coin. Also he will have his hair cut very frequently, and will keep his teeth white; he will change his clothes, too, while still good; and will anoint himself with unguent. In the marketplace he will frequent the bankers' tables; in the gymnasia he will haunt those places where the young men take exercise; in the theatre, when there is a representation, he will sit near the Generals.

For himself he will buy nothing, but will make purchases on commission for foreign friends — pickled olives to go to Byzantium, Laconian hounds for Cyzicus, Hymettian honey for Rhodes; and will talk thereof to people at Athens. Also he is very much the person to keep a monkey; to get a satyr ape, Sicilian doves, deerhorn dice, Thurian vases of the approved rotundity, walking-sticks with the true Laconian curve, and a curtain with Persians embroidered upon it. He will have a little court provided with an arena for wrestling and a ball-alley, and will go about lending it to philosophers, sophists, drill-sergeants, musicians, for their displays; at which he himself will appear upon the scene rather late, in order that the spectators might say one to another, 'This is the owner of the palaestra.'

When he has sacrificed an ox, he will nail up the skin of the forehead, wreathed with large garlands, opposite the entrance, in order that those who come in may see that he has sacrificed an ox. When he has been taking part in a procession of the knights, he will give the rest of his accoutrements to his slave to carry home; but, after putting on his cloak, will walk about the market-place in his spurs. He is apt, also, to buy a little ladder for his domestic jackdaw, and to make a little brass shield, wherewith the jackdaw shall hop upon the ladder. Or if his little Melitean dog has died, he will put up a little memorial slab, with the inscription, **a scion of Melita**. If he has dedicated a brass ring in the temple of Asclepius, he will wear it to a wire with daily burnishings and oilings. It is just like him, too, to obtain from the prytaneis by

private arrangement the privilege of reporting the sacrifice to the people; when, having provided himself with a smart white cloak and put on a wreath, he will come forward and say: 'Athenians! we, the prytaneis, have been sacrificing to the Mother of the Gods meetly and auspiciously; receive ye her good gifts!' Having made this announcement he will go home to his wife and declare that he is supremely fortunate.

XXII. The Mean Man

Meanness is an excessive indifference to honour where expense is concerned.

The Mean man is one who, when he has gained the prize in a tragic contest, will dedicate a wooden scroll to Dionysus, having had it inscribed with his own name. When subscriptions for the treasury are being made, he will rise in silence from his place in the Ecclesia, and go out from the midst. When he is celebrating his daughter's marriage, he will sell the flesh of the animal sacrificed, except the parts due to the priest; and will hire the attendants at the marriage festival on condition that they attend their own board. When he is trierarch, he will spread the steersman's rugs under him on the deck, and put his own away. He is apt, also, not to send his children to school when there is a festival of the Muses, but say that they are unwell, in order that they may not contribute. Again, when he has bought provisions, he will himself carry the meat and the vegetables from the market-place in the bosom of his cloak. When he has sent his cloak to be scoured, he will keep the house. If a friend is raising a subscription, and has spoken to him about it, he will turn out of the street when he descries him approaching, and will go home by a roundabout way. Then, he will not buy a maid for his wife, though she brought him a dower; but will hire from the women's market the girl who is to attend her on the occasions she goes out. He will wear his shoes patched with cobbler's work, and say that it is as strong as horn. He will sweep out his house when he gets up, and polish the sofas; and, in sitting down, he will twist aside the coarse cloak which he wears himself.

XXIII. The Boastful Man

Boastfulness would seem to be, in fact, pretension to advantages which one does not possess.

The Boastful Man is one who will stand in the bazaar talking to foreigners of the great sums which he has at sea; he will discourse of the vastness of his money-lending business, and the extent of his personal gains and losses; and, while thus drawing the long-bow, will send of his boy to the bank, where he keeps — a drachma. He loves, also, to impose upon his companion by the road with a story of how he served with Alexander, and on what terms he was with him, and what a number of gemmed cups he brought home; contending, too, that the Asiatic artists are superior to those of Europe; and all this when he has never been out of Attica. Then he will say that a letter has come from Antipater— ‘this is the third’ — requiring his presence in Macedonia; and that, though he was offered the privilege of exporting timber free of duty, he has declined it, that no person whatever may be able to traduce him further for being more friendly than is becoming with Macedonia. He will state, too, that in the famine his outlay came to more than five talents in presents to the distressed citizens: (‘he never could say No’;) and actually, although the persons sitting near him are strangers, he will request one of them to set up the counters; when, reckoning by sums of six hundred drachmas or of a mina, and plausibly assigning names to each of these, he will make a total of as many as ten talents. This, he will say, was what he contributed in the way of charities; adding that he does not count any of the trierarchies or public services which he has performed. Also he will go up to the sellers of the best horses, and pretend that he desires to buy; or, visiting the upholstery mart, he will ask to see draperies to the value of two talents, and quarrel with his slave for having come out without gold. When he is living in a hired house he will say (to any one who does not know better) that it is the family mansion; but that he means to sell it, as he finds it too small for his entertainments.

XXIV. The Arrogant Man

Arrogance is a certain scorn for all the world beside oneself.

The Arrogant man is one who will say to a person who is in a hurry that he will see him after dinner when he is taking his walk. He will profess to recollect benefits which he has conferred. As he saunters in the streets, he will decide cases for those who have made him their referee. When he is nominated to public offices, he will protest his inability to accept them, alleging that he is too busy. He will not permit himself to give any man the first greeting. He is apt to order persons who have anything to sell, or who wish to hire anything from him, to come to him at daybreak. When he walks in the streets, he will not speak to those whom he meets, keeping his head bent down, or at other times, when so it pleases him, erect. If he entertains his friends, he will not dine with them himself, but will appoint a subordinate to preside. As soon as he sets out on a journey, he will send some one forward to day that he is coming. He is not likely to admit a visitor when he is anointing himself, or bathing, or at table. It is quite in his manner, too, when he is reckoning with any one, to bid his slave push the counters apart, set down the total, and charge it to the other's account. In writing a letter, he will not say 'I should be much obliged,' but 'I wish it to be thus and thus'; or 'I have sent to you for' this or that; or 'You will attend to this strictly'; or 'Without a moments delay.'

XXV. The Coward

Cowardice would seem to be, in fact, the shrinking of the soul through fear.

The Coward is one who, on a voyage, will protest that the promontories are pirates; and, if a high sea gets up, will ask if there is any one on board who has not been initiated. He will put up his head and ask the steersman if he is half-way, and what he thinks of the face of the heavens; remarking to the person sitting next him that a certain dream makes him feel uneasy; and he will take of his tunic and give it to his slave; or he will beg them to put him ashore.

On land also, when he is campaigning, he will call to him those who are going out to the rescue, and bid them come and stand by him and look about them first; saying that it is hard to make out which is the enemy. Hearing shouts and seeing men falling, he will remark to those who stand by him that he has forgotten in his haste to bring his sword, and will run to the tent; where, having sent his slave out to reconnoitre the position of the enemy, he will hide the sword under his pillow, and then spend a long time in pretending to look for it. And seeing from the tent a wounded comrade being carried in, he will run towards him and cry ‘Cheer up!’; he will take him into his arms and carry him; he will tend and sponge him; he will sit by him and keep the flies off his wound — in short, he will do anything rather than fight with the enemy. Again, when the trumpeter has sounded the signal for battle, he will cry, as he sits in the tent, ‘Bother! you will not allow the man to get a wink of sleep with your perpetual bugling!’ Then, covered with blood from the other’s wound, he will meet those who are returning from the fight, and announce to them, ‘I have run some risk to save one of our fellows’; and he will bring in the men of his deme and of his tribe to see his patient, at the same time explaining to each of them that he carried him with his own hands to the tent.

XXVI. The Oligarch

The Oligarchical temper would seem to consist in a love of authority, covetous, not of gain, but of power.

The Oligarch is one who, when the people are deliberating whom they shall associate with the archon as joint directors of the procession, will come forward and express his opinion that these directors ought to have plenary powers; and, if others propose ten, he will say that 'one is sufficient,' but that 'he must be a *man*.' Of Homer's poetry he has mastered only this line, —

No good comes of manifold rule; let the ruler be one:

of the rest he is absolutely ignorant. It is very much in his manner to use phrases of this kind: 'We must meet and discuss these matters by ourselves, and get clear of the rabble and the market-place'; 'we must leave off courting office, and being slighted or graced by these fellows'; 'either they or we must govern the city.' He will go out about the middle of the day with his cloak gracefully adjusted, his hair daintily trimmed, his nails delicately pared, and strut through the Odeum Street, making such remarks as these: 'There is no living in Athens for the informers'; 'we are shamefully treated in the courts by the juries'; 'I cannot conceive what people want with meddling in public affairs'; 'how ungrateful the people are — always the slaves of a largess or a bribe'; and 'how ashamed I am when a meagre, squalid fellow sits down by me in the Ecclesia!' 'When,' he will ask, 'will they have done ruining us with these public services and trierarchies? How detestable that set of demagogues is! Theseus' (he will say) 'was the beginning of mischief to the State. It was he who reduced it from twelve cities to one, and undid the monarchy. And he was rightly served, for he was the people's first victim himself.'

And so on to foreigners and to those citizens who resemble him in their disposition and their politics.

XXVII. The Late-Learner

Late-learning would seem to mean the pursuit of exercises for which one is too old.

The Late-Learner is one who will study passages for recitation when he is sixty, and break down in repeating them over his wine. He will take lessons from his son in 'Right Wheel,' 'Left Wheel,' 'Right-about-face.' At the festivals of heroes he will match himself against boys for a torch-race; nay, it is just like him, if haply he is invited to a temple of Heracles, to throw off his cloak and seize the ox in order to bend its neck back. He will go into the palaestras and try an encounter; at a conjuror's performance he will sit out three or four audiences, trying to learn the songs by heart; and, when he is initiated into the rites of Sabazius, he will be eager to acquit himself best in the eyes of the priest. Riding into the country on another's horse, he will practise his horsemanship by the way; and, falling, will break his head. On a tenth-day festival he will assemble persons to play the flute with him. He will play at *tableaux vivants* with his footman; and will have matches of archery and javelin-throwing with his children's attendant, whom he exhorts, at the same time, to learn from *him*, — as if the other knew nothing about it either. At the bath he will wriggle frequently, as if wrestling, in order that he may appear educated; and, when women are near, he will practise dancing-steps, warbling his own accompaniment.

XXVIII. The Evil-Speaker

The habit of Evil-speaking is a bent of the mind towards putting things in the worst light.

The Evil-speaker is one who, when asked who so-and-so is, will reply, in the style of genealogists, 'I will begin with his parentage. This person's father was originally called Sosias; in the ranks he came to rank as Sosistratus; and, when he was enrolled in his deme, as Sosidemus. His mother, I may add, is a noble damsel of Thrace — at least she is called "my life" in the language of Corinth — and they say that such ladies are esteemed noble in their own country. Our friend himself, as might be expected from his parentage, is — a rascally scoundrel.' He is very fond, also, of saying to one: 'Of course — *I* understand that sort of thing; you do not err in your way of describing it to our friends and me. These women snatch the passers-by out of the very street... That is a house which has not the best of characters...Really there *is* something in that proverb about the women...In short, they have a trick of gossiping with men, — and they answer the hall-door themselves.'

It is just like him, too, when others are speaking evil, to join in:— 'And *I* hate that man above all men. He *looks* a scoundrel — it is written on his face; and his baseness — it defies description. Here is proof — he allows his wife, who brought him six talents of dowry and has borne him a child, three copper coins for the luxuries of the table; and makes her wash with cold water on Poseidon's day.' When he is sitting with others, he loves to criticise one who has just left the circle; nay, if he has found an occasion, he will not abstain from abusing his own relations. Indeed, he will say all manner of injurious things of his friends and relatives, and of the dead; misnaming slander 'plain speaking,' 'democratic,' 'independence,' and making it the chief pleasure of his life.

[Thus can the sting of ill temper produce in men the character of insanity and frenzy.]

XXIX. The Patron of Rascals

The Patronising of Rascals is a form of the appetite for vice.

The Patron of Rascals is one who will throw himself into the company of those who have lost lawsuits and have been found guilty in criminal causes; conceiving that, if he associates with such persons, he will become more a man of the world, and will inspire the greater awe. Speaking of honest men, he will add 'so-so,' and will remark that no one is honest, — all men are alike; indeed, one of his sarcasms is, 'What an honest fellow!' Again, he will say that the rascal is 'a frank man, if one will look fairly at the matter.' 'Most of the things that people say of him,' he admits, 'are true; but some things' (he adds) 'they do not know; namely that he is a clever fellow, and fond of his friends, and a man of tact'; and he will contend in his behalf that he has 'never met with an abler man.' He will show him favour, also, when he speaks in the Ecclesia or is at the bar of a court; he is fond, too, of remarking to the bench, 'The question is of the cause, not the person.' 'The defendant,' he will say, 'is the watch-dog of the people, — he keeps an eye on evil-doers. We shall have nobody to take the public wrongs to heart, if we allow ourselves to lose such men.' Then he is apt to become the champion of worthless persons, and to form conspiracies in the law-courts in bad causes; and, when he is hearing a case, to take up the statements of the litigants in the worst sense.

[In short, sympathy with rascality is sister to rascality itself; and true is the proverb that 'Like moves towards like.']

XXX. The Avaricious Man

Avarice is excessive desire of base gain.

The Avaricious man is one who, when he entertains, will not set enough bread upon the table. He will borrow from a guest staying in his house. When he makes a distribution, he will say that the distributor is entitled to a double share, and thereupon will help himself. When he sells wine, he will sell it watered to his own friend. He will seize the opportunity of taking his boys to the play, when the lessees of the theatre grant free admission. If he travels on the public service, he will leave at home the money allowed to him by the State, and will borrow of his colleagues in the embassy; he will load his servant with more baggage than he can carry, and give him shorter rations than any other master does; he will demand, too, his strict share of the presents, — and sell it. When he is anointing himself at the bath, he will say to the slave-boy, ‘Why, this oil that you have bought is rancid’ — and will use someone else’s. He is apt to claim his part of a copper coin found by his servants in the streets, and to cry ‘Shares in the luck!’ Having sent his cloak to be scoured he will borrow another from an acquaintance, and delay to restore it for several days, until it is demanded back.

These, again, are traits of his. He will weigh out their rations to his household with his own hands, using ‘the measure of the frugal king,’ with the bottom dented inward, and carefully brushing the rim. He will buy a thing privately, when a friend seems ready to sell it on reasonable terms, and will dispose of it at a raise price. It is just like him, too, when he is paying a debt of thirty minas, to withhold four drachmas. Then, if his sons, through ill-health, do not attend the school throughout the month, he will make a proportionate deduction from the payment; and all through Anthesterion he will not send them to their lessons because there are so many festivals, and he does not wish to pay the fees. When he is receiving rent from a slave, he will demand in addition the discount charged on the copper money; also, in going through the account of the manager <he will challenge small items>. Entertaining his clansmen, he will beg a dish from the common table for his own servants; and will register the half-radishes left over from the repast, in order that the attendants may not get them. Again, when he travels with acquaintances, he will make use of their servants, but will let his own slave

out for hire; nor will he place the proceeds to the common account. It is just like him, too, when a club-dinner is held at his house, to secrete some of the fire-wood, lentils, vinegar, salt, and lamp-oil placed at his disposal. If a friend, or a friend's daughter, is to be married, he will go abroad a little while before, in order to avoid giving a wedding present. And he will borrow from his acquaintances things of a kind that no one would ask back, — or readily take back, if it were proposed to restore them.

Treatise on Odours



Translated by Arthur F. Hort

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Introductory: Of odours in general and the classification of them.

[1.1] Odours in general, like tastes, are due to mixture: for anything which is uncompounded has no smell, just as it has no taste: wherefore simple substances have no smell, such as water air and fire: on the other hand earth is the only elementary substance which has a smell, or at least it has one to a greater extent than the others, because it is of a more composite character than they.

Of odours some are, as it were, indistinct and insipid, as is the case with tastes, while some have a distinct character. And these characters appear to correspond to those of tastes, yet they have not in all cases the same names, as we said in a former treatise; nor in general are they marked off from one another by such specific differences as are tastes: rather the differences are, one may say, in generic character, some things having a good, some an evil odour. 2 But the various kinds of good or evil odour, although they exhibit considerable differences, have not received further distinguishing names, marking off one particular kind of sweetness or of bitterness from another: we speak of an odour as pungent, powerful, faint, sweet, or heavy, though some of these descriptions apply to evil-smelling things as well as to those which have a good odour.

Putridity however is a general term, applied, one may say, to anything which is subject to decay: for anything which is decomposing has an evil odour, — unless indeed the name putridity be extended to sourness in wine because the change in the wine is analogous to decomposition. 3 The evil odour of putridity is found in all things, alike in plants in animals and in inanimate things: it attends the decay of things which are not formed directly out of a substance which is decaying: for some things have also the odour of that substance, though it is not found in every case. Thus in many instances things which are produced by decaying matter have no evil odour: for instance, mushrooms which grow from dung have none: but things which grow from decay and are actually formed out of it have such an odour. To speak generally then, things that have been cooked, delicate things, and things which are least of an earthy nature have a good odour, (odour being a matter of exhalation), and it is obvious that those of an opposite character have an

evil odour. But, even as many things pleasant to the taste present a certain bitterness, so many things that have a good odour have a kind of heavy scent.

Of natural odours; of those of animals and of the effect of odours on animals.

[2.4] Every plant animal or inanimate thing that has an odour has one peculiar to itself: but in many cases it is not obvious to us because, one might almost say, our sense of smell is inferior to that of all other animals. Thus things which appear to us to have no odour give forth an odour of which other animals are conscious: for instance beasts of burden can smell the barley of Kedropolis, and refuse to eat it because of its evil odour. Also we are unaware of the odour of animals which appear to possess one. Now no animal appears to take pleasure in a good odour for its own sake, so to speak, but only in the odour of things which conduce to its nurture and enjoyment. Indeed some animals seem to be annoyed by odours, even good ones, if what is said of vultures and beetles is true; the explanation is that their natural character is antipathetic to odours. To appreciate this in particular cases one should take into consideration the temperament of the animal in question and also its power of smell.

Of smell and taste.

[5] Now the odour of some things which have a good odour resides in things which are used for food, for instance that of stone-fruits pears and apples, the smell of which is sweet even if one does not eat them; indeed it may be said to be sweeter in that case. However, to make a general distinction, some odours exist independently, while others are incidental; those of juices and things used for food are incidental, those of flowers exist independently. And, as was said above, things which have a good odour are generally of unpleasant, astringent or somewhat bitter taste. Again some things which have a good taste have also an evil odour, such as the carob, which is sweet (this is true of some regions, if not of all). Again the Phoenician cedar, though it is sweet to the taste, when chewed produces a sort of evil odour, though it makes the water fragrant.

Of odours in plants.

[6] Some odours being found in plants or in their parts — as twig, leaf, bark, fruit, gum — and others, as we distinguished, in animals and in inanimate things, it is plain that the former are matured each of them in the part to which it belongs; and a good or evil odour follows according to the natural character of that part, the maturing being due to the warmth which is found in it. On the other hand in inanimate things the odour, like the taste, is formed and modified by the properties of the simple substances of which the thing is made.

Of artificial odours in general and their manufacture: especially of the use of perfumes in wine.

[3.7] Next we must endeavour to speak of those odours, and also those tastes, which are artificially and deliberately produced. In either case it is clear that improvement is always what we have in view; for that is the aim of every artificial process. Now even uncompounded substances have certain odours, which men endeavour to assist by artificial means, even as they try to assist nature in producing palatable tastes. However, to speak generally, the result is usually obtained by a mixture, and accordingly such mixtures are of two things (or classes of things), a liquid and a solid: but there are three ways in which the result may be reached (the combination being one either of like with like, or of unlike substances), according as a liquid is compounded with another liquid, a solid with another solid, or a solid with a liquid.

[8] For tastes and odours alike are derived from these two things: the method of the makers of spices and perfume-powders is to mix solid with solid, that of those who compound unguents or flavour wines is to mix liquid with liquid: but the third method, which is the commonest, is that of the perfumer, who mixes solid with liquid, that being the way in which all perfumes and ointments are compounded. Further one must know which odours will combine well with which, and what combination makes a good blend, just as in the case of tastes: for there too those who make combinations and, as it were, season their dishes, are aiming at this same object. So much for the ingredients and the methods whereby these arts attain their ends.

[9] The object of the mixture is in the one case simply the production of a particular odour and the gratification of the corresponding sense, in the other there is a desire to produce, as it were, a pleasanter taste: this for instance is the object of flavouring wine with perfumes or of putting spices into it. For the two senses of taste and smell being akin to one another, each provides in a way for the enjoyment of the other: wherefore it is through things which appeal to the taste, as well as those which appeal to the sense of smell, that men try to discover fragrant odours.

[10] The question may perhaps be raised why perfume and other fragrant things, while they give a pleasant taste to wine, yet have not this effect on any other article of food, but in all cases spoil food, whether it be cooked or not.

The explanation we must take to be that this is what happens — the perfume if mixed with solid things is in any case powerful enough to deprive them of their proper taste, and at the same time it makes obtrusive its own taste, which is astringent and somewhat bitter, — all perfumeries having that character, — while, if one bites up the food, this effect is even more apparent because the food is crushed and broken up, and also because it remains longer in the mouth. 11 But on wine neither effect is produced, since in this the taste is very strong and too generally diffused to be overpowered: also wine does not linger on the palate for any length of time, but merely touches it, so that, while it makes one conscious of its own pleasant taste, it does not make the palate feel the bitter unpalatable taste of the perfume: in fact the odour of this acts as a sort of relish to the draught. This effect indeed it has on wine which is sweet and specially needs the addition of perfume, because it has no ‘relish’ of its own; while with other wines the reason is that, as the effect of the mixture, the two odours combine, as it were, to form one. Wine indeed, as was said before, has a special property of assimilating odours.

[12] Another question also suggests itself, — why it is that, while the smell of flowers and other things used for garlands, though it is not so strong, can be perceived even at a great distance, the iris-perfume, spikenard and other fragrant solids smell stronger at a short distance: and of some of these the smell is only perceived when they are eaten, while some need even to be bruised and broken up, and others to be subjected to fire, as myrrh frankincense and anything that is burnt as incense. 13 The explanation is that, whereas in flowers that which causes the smell is on the surface, seeing that the texture of flowers is open and they are not substantial, in all such solid substances as roots the power of producing smell is diffused through a substantial mass, while the exterior parts are dried up and of close texture: and this is why flowers emit the scent which exhales from them to a long distance, while things like roots need an opening of their passages. Hence, when these are broken up or bruised, they are in all cases more fragrant, while, if flowers are crushed, they have a comparatively evil smell: for under such treatment roots give forth the property which belongs to them, but flowers acquire a property which is not their own. Again frankincense and myrrh, since they are by nature of even closer texture than roots, need a gentle application of fire, which, by gradually warming them, will cause the scent to be exhaled. For, if

these substances are bruised or crushed, they will indeed present an odour, but it will not be so sweet nor so lasting as when they have been subjected to fire. Such are the explanations of these difficulties.

Of the oils used as the vehicle of perfumes.

[4.14] Now the composition and preparation of perfumes aim entirely, one may say, at making the odours last. That is why men make oil the vehicle of them, since it keeps a very long time and also is most convenient for use. By nature indeed oil is not at all well suited to take in an odour, because of its close and greasy character: and of particular oils this is specially true of the most viscous, such as almond-oil, while sesame-oil and olive-oil are the least receptive of all.

[15] The oil most used is that derived from the Egyptian or Syrian balanos, since this is the least viscous; the olive-oil which is most used is that which is pressed from 'coarse olives' in the raw state, since this is thought to be the least greasy and the least coarse: this is used while it is new, not when it is old, for that which is kept above a year is useless, having become thick and viscous. This then is the kind of olive-oil which is most suitable, since it is the least greasy. Some say that for unguent the oil derived from bitter almonds is best: these are abundant in Cilicia, where an unguent is made from them. 16 It is said that this is suitable for choice perfumes, like the oil of the Egyptian balanos: this is suitable in itself, however the shells of the fruit are thrown into the oil to give it a good odour: indeed they are also thrown into that which is made from bitter almonds. Once more, is it not inconsistent to seek the vehicle which has the least odour of its own, such as the oil which is pressed raw from 'coarse olives,' and yet at the same time to use the above-mentioned oils as vehicles? (for oil of almonds has a pungent smell). Possibly the explanation is that it is only by being cooked that oil acquires an evil smell. These matters then are subject for enquiry.

[17] They use spices in the making of all perfumes; some to thicken the oil, some in order to impart their odour. For in all cases they thicken the oil to some extent to make it take the odour better, just as they treat wool for dyeing. The less powerful spices are used for the thickening, and then at a later stage they put in the one whose odour they wish to secure. For that which is put in last always dominates, even if it is in small quantity; thus, if a pound of myrrh is put into a half-pint of oil, and at a later stage a third of an ounce of cinnamon is added, this small amount dominates.

[18] At this one may well wonder; and also why it is that the previous

addition of spices, which have an odour of their own, renders the oil more receptive: for the vehicle should be scentless, but a substance over which another substance has thus prevailed, cannot be scentless, so that it ought, one would think, to have become *less* receptive. However both facts, or rather all of them, may be accounted for in the same way: — the spices, being solid, attract to themselves the viscid part of the oil, and so it attaches itself to them; thus the density of the oil is destroyed: the oil, thus becoming thinner by the removal of its viscid part which chiefly contains the characteristic odour, becomes more receptive of the spice which is added to it, because it does not now offer resistance.

[19] Again that odour which is due to the spices becomes less powerful as it is spent on the viscid part of the oil, while at the same time it is preserved by this because it has entirely filled up its passages. Wherefore it naturally follows that, even if the added spice is in small quantity, its odour predominates, since it passes into a vehicle which is in itself not at all powerful and which is more receptive than itself. A corresponding account may be given of the keeping quality of the several oils, of their power of resisting fire, and other such qualities. Thus that oil which is most receptive, for instance, that of the Egyptian balanos, will also keep longest, and for the same reason; namely that that oil which is most receptive unites, more than others, into one single substance, as it were, with the spices. Such a substance will always last longer than others; which also explains why, if exposed to fire, it is less affected than others.

[20] Of the other oils the same applies to that of sesame, this being specially receptive; but, for the contrary reason, almond-oil soon loses its virtue and keeps for a shorter time than any other, for that oil which has been least receptive parts soonest with the property received. Sesame-oil however receives rose-perfume better than other oils because of its viscid quantity; and, when subjected to fire, it gives out a smell of sesame, as though it were being disintegrated. Such are the special characters and properties of the various oils.

Of the spices used in making perfumes and their treatment.

[5.21] Almost all spices and sweet scents except flowers are dry hot astringent and mordant. Some also possess a certain bitterness, as we said above, as iris, myrrh, frankincense, and perfumes in general. However the most universal qualities are astringency and the production of heat; they actually produce these effects.

[22] All spices are given their astringent quality by exposure to fire, but some of them assume their special odours even when cold and not exposed to fire; and it also appears that, just as with vegetable dyes some are applied hot and some cold, so is it with odours. But in all cases the cooking, whether to produce the astringent quality or to impart the proper odour, is done in vessels standing in water and not in actual contact with the fire; the reason being that the heating must be gentle, and there would be considerable waste if these were in actual contact with the flames; and further the perfume would smell of burning.

[23] However there is less waste when the perfume obtains its proper odour by exposure to fire than when it does so in a cold state, since those perfumes which are subjected to fire are first steeped either in fragrant wine or in water: for then they absorb^a less: while those which are treated in a cold state, being dry, absorb^b more, for instance bruised iris-root. Thus, if into eight and a half gallons of oil we put thirteen gallons of dry and bruised iris-root, they say that much loss is caused, while if one does not steep it too much, only about eleven pints and a half are wasted: and in the case of most perfumes the waste is less.

[24] However the superior iris-perfume is made by using the root dry and not subjecting it to fire: for then its virtue asserts itself more completely than when it is steeped in a liquid or subjected to fire. It also comes to pass that, if the perfumes have been first steeped, their virtues are, as it were, squeezed out of them to a greater extent, because they take in and absorb less: and so, when they are making them astringent, they do not leave the spices in the oil for long, but take them out, so that they should not absorb an excessive amount.

[25] For making each perfume they put in the suitable spices. Thus to make kypros they put in cardamom and aspalathos, having first steeped them in

sweet wine. To make rose-perfume they put in ginger-grass aspalathos and sweet-flag: and these are steeped as in the case of kypros. So too into each of the others are put the spices which suit them. Into rose-perfume moreover is put a quantity of salt: this treatment is peculiar to that perfume, and involves a great deal of waste, twenty-three gallons of salt being put to eight gallons and a half of the perfume.

[26] The manufacture of kypros resembles that of rose-perfume, except that, unless one soon takes out the flowers and squeezes them out, decay sets in and ruins the perfume by giving it a disagreeable smell, since they cause decay as they get soaked. Similar also is the manufacture of quince-perfume: the oil is first made astringent, and is cold when the quinces are put into it: then they take them out before they turn black, removing each batch before the next is put in: for, as they turn black, decay ensues because they get soaked through — just as in the case of kypros.

Of the various parts of plants used for perfumes, and of the composition of various notable perfumes.

[6.27] Perfumes are compounded from various parts of the plant, flowers leaves twigs root wood fruit and gum: and in most cases the perfume is made from a mixture of several parts. Rose and gilliflower perfumes are made from the flowers: so also is the perfume called susinon, this too being made from flowers, namely, lilies: also the perfumes named from bergamot-mint and tufted thyme, kypros, and also the saffron-perfume; the crocus which produces this is best in Aegina and Cilicia. Instances of those made from the leaves are the perfumes called from myrtle and drop-wort: this grows in Cyprus on the hills and is very fragrant: that which grows in Hellas yields no perfume, being scentless.

[28] From roots are made the perfumes named from iris spikenard and sweet marjoram, and ingredient in which is koston; for it is the root to which this name is applied. The Eretrian unguent is made from the root of kypeiron, which is obtained from the Cyclades as well as from Euboea. From wood is made what is called 'palm-perfume': for they put in what is called the 'spathe,' having first dried it. From fruits are made the quince-perfume, the myrtle, and the bay. The 'Egyptian' is made from several ingredients, including cinnamon and myrrh.

[29] Again from several parts of the plant is made the perfume called megaleion, which is made from cinnamon and . . . and from the myrrh when it is bruised flows an oil: it is in fact called stakte (in drops) because it comes in drops slowly. Some indeed say that this is the only simple uncompounded perfume, and that all at others are compound, though made from a larger or smaller number of ingredients, and that iris-perfume is made from the smallest number of all. Some assert this, but others declare that the manufacture of stakte (myrrh-oil) is as follows: having bruised the myrrh and dissolved it in oil of balanos over a gentle fire, they pour hot water on it: and the myrrh and oil sink to the bottom like a deposit; and, as soon as this has occurred, they strain off the water and squeeze the sediment in a press.

[30] Megaleion, these authorities say, is compounded of burnt resin and oil of balanos, with which are mixed cassia cinnamon and myrrh. They add that this perfume and the Egyptian are the most troublesome to make, since no

others involve the mixture of so many and such costly ingredients. To make megaleion, they say, the oil is boiled for ten days and nights, and not till then do they put in the resin and the other things, since the oil is more receptive when it has been thoroughly boiled. The superior kind of sweet marjoram-perfume, they say, is made of all the best spices except sweet marjoram: in fact this is the only spice which perfumers do not use for any perfume, and the name is a misnomer.

[31] Some perfumes are made up colourless, some are given a colour. They give a colour to sweet marjoram-perfume, rose-perfume, and megaleion, while among expensive kinds the Egyptian, quince-perfume and kypros are colourless, as well as all the cheaper kinds. The reason why these are made without colour is that it is desired that the Egyptian and kypros should look white and that quince-perfume should have the colour of quinces, while it is not worth while to add colour to the cheaper sorts. The dye used for colouring red perfumes is alkanet; the sweet marjoram-perfume is dyed with the substance called khroma (dye), which is a root imported from Syria.

Of the properties of various spices.

[7.32] It is thought that not only the smells of perfumes contribute to a pleasant taste, but also the qualities of pungency and heat which are found in some of them: accordingly some of these perfumes are also mixed with certain wines to give, as it were, 'point' to them. Thus myrrh is hot and has a biting quality as well as being astringent, and it also has a bitter quality. Cinnamon again has a fair amount of pungency as well as heat. So too is it with koston. Cassia exceeds both of these in heat pungency and astringency. Iris-perfume is hot and astringent, and excessively bitter when it is fresh, in which state it causes sores on the skin of those that work on it. Cardamom has also a biting quality as well as heat. The juice and the fruit of balsam of Mecca are more active in producing both these qualities, while the wood is less so. Nepaul cardamom has also a property similar to this.

[33] Ginger-grass has a more biting quality than sweet-flag, and is hotter; but both are equally astringent. Kypeiron is however more astringent than either. The sweet-scented aspalathos also has this quality. Spikenard has a biting quality as well as heat. Maron and the khroma which is mixed with sweet marjoram-perfume are heating. The root of alkanet also contributes to the colour of rose-perfume and iris-perfume.

[34] Now some spices when they are fresh have at first heavy and pungent qualities, but in course of time become sweet till they have reached their prime, and then lose their properties again. Thus the iris is at its prime for manufacturing the perfume for three years after it was gathered, and lasts for six years at longest. Maron lasts two years; myrrh ten, and improves with time. Cinnamon koston and cassia keep at their best for about the same periods as these. Ginger-grass and sweet-flag soon get past their prime. Of flowers some, like the rose, possess their virtues from the first while they are still fresh, some only after they are dried, as crocus and melilotos, these having a certain amount of moisture while they are fresh.

[35] These examples may suffice for study of the characters and properties of spices.

Of the medicinal properties of certain perfumes.

[8] Megaleion is believed to relieve the inflammation caused by any wound, and rose-perfume to be excellent for the ears. And this is probable enough. For the former is composed, as was said, of burnt resin cassia cinnamon and myrrh, and all these have astringent and drying properties: while the reason why rose-perfume is good for the ears is that salt is used in the manufacture of it: for it is by reason of the salt that it dries and warms (which is why 'sea-foam' is also good for the ears). Its use against strangury however needs explanation: for it is said to be specially helpful against this. The explanation may be that anything which is to remove the difficulty must first dissolve that which is to be removed; and this is the effect of the salt, while the fragrance supplies the necessary stimulus.

[36] Why however, it may be asked, though iris-perfume is fragrant, does it not give the stimulus? Perhaps it is because it is astringent and closes the passages, so that by shutting them it prevents free course. On the other hand this perfume acts as a laxative on the bowels because of its heating quality and because it astringes the passages leading to the bladder: for, when these are closed, the liquid collects in the bowels. In general iris-perfume, as well as others, has medicinal properties. And the explanation in all cases, to put it generally, lies in the above-mentioned properties of astringency and heating; for it is spices possessing these properties that are medicinal. However these matters lie outside our subject of study.

Of rules for the mixture of spices, and of the storing of various perfumes.

[9.37] There is no fixed rule for the combination and mixture of spices in the sense that the same components will always produce a satisfactory and a uniform result: the result varies by reason of the varying quality of the virtues found in the spices. For this there are several reasons. One, which applies also to fruits, is the character of the season; this causes the virtues to be sometimes much more than ordinarily powerful, sometimes less so. Another is to be found in the time of collection, that is, in the case of those spices which need time to come to their prime, as was said: for here too it is possible to be too soon or too late.

[38] Of these causes that which depends on the seasons is not within our control, except so far as we can discover which spices in a particular season have powerful, and which weak virtues. But we can control those which depend on collecting them when in their prime, or on keeping them after they are collected, that is, if we know pretty well how to hit the right moment.

So much for the origin and composition of perfumes.

Those which last longest are the Egyptian, the iris, the sweet marjoram and the spikenard perfumes: but myrrh-oil has the longest life of any; for it will keep any time. A certain perfumer said that he had had Egyptian perfume in his shop for eight years, and iris-perfume for twenty, and that it was still in good case, in fact better than fresh perfume. These are instances of perfumes which will keep a long time.

[39] On the other hand all those made from flowers have little vigour. These are usually at their best after two months, but they deteriorate when a year has past and the season has come round again at which the flowers are at their best. Also, as these perfumes lack vigour, so also do they quickly mellow, and, in most cases, quickly evaporate. Those made from roots and the other parts of the plant last longer, their odour being fuller stronger and more substantial.

[40] Perfumes are ruined by a hot season or place or by being put in the sun. This is why perfumers seek upper rooms which do not face the sun but are shaded as much as possible. For the sun or a hot place deprives the perfumes of their odour, and in general makes them lose their character more than cold treatment: while cold and frost, even if they make them less odorous by

congealing them, yet do not altogether deprive them of their virtue. For the most destructive thing that can happen to them, as to wines and other savours, is that they should be deprived of their proper heat. 41 This is why men put them into vessels of lead and try to secure phials of alabaster — a stone which has the required effect: for lead is cold and of close texture, and stone has the same character, that being the best for keeping perfumes which has it in the highest degree. So that vessels made of these materials keep the perfume well for both reasons, their coolness and their closeness of texture: they neither let the odour pass away through them, nor do they take in anything else. For evaporation destroys the perfume, and so also does any foreign substance which finds its way in: for even draughts of air destroy odours and cause them to waste, as was said, especially those odours which do not belong to a thing's essential nature.

Of the properties of certain perfumes.

[10.42] Headache is caused by sweet marjoram spikenard and megaleion among costly perfumes: most of the cheap ones have also this effect, notably that one made from bay. The lightest are rose-perfume and kypros, which seem to be the best suited to men, as also is lily-perfume. The best for women are myrrh-oil, megaleion, the Egyptian, sweet marjoram, and spikenard: for these owing to their strength and substantial character do not easily evaporate and are not easily made to disperse, and a lasting perfume is what women require.

[43] Inasmuch however as some perfumes are stronger than others, the stronger being those made from roots and the others already mentioned, for this reason those derived from flowers are more fragrant if they are not bruised, while bruising improves those made from roots and the others. For the former kind evaporate and pass off as they are warmed by the bruising, thus losing their character, while the latter owing to their strength have, as it were, certain passages opened by the bruising, and so their fragrance is made more obvious. 44 This, as was said, also takes place in the case of the roots themselves and of the solid things in general; but the result in the case of flowers is just the opposite, so that both kinds behave according to their origin. That this should apply to the perfumes made from myrrh is quite natural for both reasons; they mingle more than others with the air, and the heat due to the bruising is not prejudicial, since it is gentle, and myrrh in fact require as certain amount of heating. And in general any strong odour, whether it be pleasing or the reverse, whether it be pungent or sharp, or whatever its character, becomes more pronounced with movement; for then it becomes, as it were, active and mingles more with the air.

The Egyptian perfume, myrrh-oil, and any others that have a strong odour become sweeter if they are mixed with fragrant wine; for then their heavy quality is removed. In fact myrrh itself is made to exhale a more fragrant odour by being steeped in sweet wine, as was said in a former treatise.

[45] If one has regard to the virtues of the perfumes in question, one may well be surprised at what happens in the case of rose-perfume: — though it is lighter and less powerful than any other, if one has first been scented with it, it destroys the odour of the others. And this is why perfumers, if a purchaser hesitates and is not inclined to buy this perfume, scent him with it so that he is

not able to smell the others. The explanation is that, being very delicate and acceptable to the sense of smell, by reason of its lightness it penetrates as no other can and fills up the passages of the sense, so that being entirely taken up and filled with it, it is unable to judge of others. 46 For the power of judging is inhibited in two, or possibly in three ways; one is that which has just been mentioned; another is that the sense of smell is, as it were, intoxicated with its powerful virtues and becomes stupefied: the third is that the sense may be preoccupied with the superior odour; for then it is not easy to introduce after it what is inferior, since the sense of smell refuses this — just as the sense of taste in like case refuses flavours and foods in general.

[47] It is also thought that the rose even weakens the effect of compound perfume; for, when the flower is at its best, they treat compound perfumes with it; and, when these come to be opened, they smell only or chiefly of rose. However this effect is only temporary and transient because of the weakness and delicacy of the rose-scent, (the very quality which also causes it to assert itself over the scent of the other ingredients). For, as it is so delicate and is compressed by confinement, it is exhaled before the others and disperses in all directions. It is also for this reason that the rose-scent only asserts itself for a short time and then is overpowered again; for anything that is delicate and subtle must be lacking in vigour.

[48] Certain wines have also a similar effect: if they are first drunk, there is no satisfaction in others. Some again make it even difficult to take others after them; this is the effect for instance of wine of Erythrae, which has a taste of brine and is subtle. The explanation one must endeavour to find by comparing analogous cases. However there is one peculiarity which as we have already more or less indicated, is possessed by rose-perfume only; while all or most of the others are heady, this, as was said, gives actual relief from heaviness and discomfort, even from that caused by other perfumes.

[49] The reason for this is plain in view of what has been already said, seeing that this perfume overpowers others and penetrates everywhere. For the others that are heady are heavy because they are made of heavy substances, whether roots or juices; while this perfume is both light as to its scent and also by its heat well adapted to bring the passages to a suitable temperature and to open them. For pains in the head are due to an excess of moisture in it, or of air which gets confined in it, so that it is necessary to get

rid of the one, and to raise the temperature of the other or to remove it.

[50] And for all such purposes heat is useful, both for removing the moisture or air, and, still more, for raising the temperature of the passages and opening them: and to these ends it is helpful that the perfume should have been prepared with salt, since the effect of salt is to open the passages and to warm them thoroughly. Again the fragrance also supplies a stimulus to movement. This perfume is also considered to be good against lassitude, because its heat and its lightness make it suitable, and also because it penetrates to the inner passages. Some however say that kypros is quite as effectual: for this too has a delicate scent which is grateful to the skin. These and similar properties may be considered peculiar to these particular perfumes.

Of other properties and peculiarities of perfumes.

[11.51] The admixture of rose-perfume, whether in scents or in flavours, if it be well blended, is beneficial, in the one case by removing the heaviness and strength of the scent, in the other by imparting a fragrant scent or a sweet taste to the flavour, as in the case of wines. Thus the wine which is served in the town-hall of Thasos, which appears to be of wonderfully delightful quality, is thus flavoured. For they put into the jar a lump of dough which has been kneaded up with honey, so that the wine gets its fragrance from itself, but its sweet taste from the honeyed dough.

[52] This result also follows, it is said, from the mixture of different wines, — for example, if a strong fragrant wine be mixed with one that is mild and without fragrance, (for instance, if wine of Heracleia be mixed with wine of Erythrae), since the latter contributes its mildness and the former its fragrance: for the effect is that they simultaneously destroy one another's inferior qualities through the mildness of the one and the fragrance of the other. There are many other such blends mentioned by and known to experts. And it is quite to be expected that such a result should follow from blending odours, as it does from blending colour, if one discovers the suitable combinations. This then is peculiar to rose-perfume.

[53] However there is one question which applies to all perfumes, namely, why it is that they appear to be sweetest when the scent comes from the wrist; so that perfumers apply the scent to this part. The explanation must be sought by observing what happens in the contrary case, inasmuch as heat changes or destroys the character of a scent, and the effect on the sense of smell is immediately perceived when perfumes are brought into close contact with the skin.

[54] The question is also raised why those who do not habitually use perfumes smell of them more strongly, when they do, than those who use them habitually. The suggestion might be made that this is an illusion due to the fact that the use is not habitual, and does not represent what really happens. If however it does, it would appear that in the one case the perfume becomes, as it were, confused with a number of other scents which weaken its force (the smell of the skin also becoming mixed with it), while in the other case the porous condition of the skin takes in the scent as it were

uncontaminated, and so makes it perceptible by the sense of smell, because it lingers for some time. One might also make a suggestion of opposite character, that the skin takes in perfumes less readily because it is not used to them, and so, as the perfumes mingle with it more slowly, they preserve their scent for a longer time. One may add that this is a small point and that all do not agree as to the fact.

[55] Those perfumes whose scent is strongest get the best hold on the skin head and other parts of the body, and last for the longest time: such are megaleion, Egyptian perfume and sweet marjoram-perfume. Those on the other hand which are weak and have not a powerful scent, since they are volatile and evaporate, also quickly come to an end; for instance rose-perfume and kypros.

[56] There are some however whose scent is even better on the second day, when any heavy quality that they possessed has evaporated. Some again are altogether more permanent, as spikenard and iris-perfume, and the stronger^a a perfume is, the longer it lasts. Again some perfumes for some reason keep their scent in the bath when the body is relaxed, or at least do not help to produce a disagreeable effect; while others become disagreeable and cause an even more unpleasant odour than the sweat, as though some sort of decomposition or decay took place.

Let this suffice for an account of the manufacture and properties of perfumes.

Of the making of perfume-powders and compound perfumes.

[12.57] As to the mixing of solid substances to make powders^b and compound perfumes, we do not find it here necessary to mix certain specified ingredients: the more numerous and the more various the perfumes that are mixed, the more distinguished and the more grateful will be the scent — just as though one were mixing whatever spices themselves were procurable. As a matter of fact the custom is to use a mixture made of all kinds. Again in perfumes of this class the aim and object is not to make the mixture smell of some one particular thing, but to produce a general scent derived from them all. This is why every few days they open the vessel and remove each time that perfume whose scent is overpowering the others, adding at the same time smaller quantities of the less powerful scents, such as . . ., while some perfumes are never added, such as galingale, of which we spoke just now.

[58] When they make compound perfumes, they moisten the spices with fragrant wine: and this certainly seems to be useful for producing fragrance, seeing that perfumers also use it. These compound perfumes last a long time. They are used to impart a pleasant odour to clothes, while the powders are used for bedding, so that they may come in contact with the skin: for this kind of preparation gets a better hold and is more lasting, so that men use it thus instead of scenting their bodies directly. Some, before putting the powder in the bedding, soak it in fragrant wine, so that it may acquire its scent: and some powders they moisten by mixing them with mead and wine, or again simply with mead. For in general both these things help to give them fragrance. Compound perfumes also last well. From which what was said above becomes manifest, inasmuch as solid perfumes, when mixed with one another, acquire a greater fragrance.

[59] It is to be expected that perfumes should have medicinal properties in view of the virtues of spices: for these too have such virtues. The effects of plasters and of what some call ‘poultices’ prove what virtues they display, since they disperse tumours and abscesses and produce a distinct effect on various other parts of the body, on its surface, but also on the interior parts: for instance, if one lays a plaster on his abdomen and breast, the patient forthwith produces fragrant odours along with his eructations.

Of the characteristic smells of animals, and of certain curious facts as to the smell of animal and vegetable products.

[13.61] The smells of animals correspond to their several characters: each has a smell of its own according to its particular composition. These smells are pleasant and pure when the animal is in its prime and in good condition, and even pleasanter when they are young and tender. But the smell is strongest and least pleasant at the breeding season, and generally when the body is wasting or out of condition: wherefore goats stags hares and other animals have most smell at such times.

[62] It is a remarkable fact and peculiar to the goat that goat-skins are sympathetically affected when the breeding season comes round. The reason plainly is that there remains somehow in the hide the sort of virtue or moisture from which arises the breeding impulse when the animal is alive. It is natural therefore that, when this is excited and warmed by the air, the skin also should be excited so far as it belongs to it to be so affected. Wherefore the original cause as it were of the phenomenon is the special condition of the animal at such periods: for at these times even those males which are not breeding have the smell, and the sterile goats and the females in general. Indeed, though at that particular time the fact that animals are actually breeding is a powerful factor in producing the smell, yet their condition is in itself a cause.

[63] Similar sympathetic behaviour is found in a manner in other things also. Thus wine appears to 'bloom' at the same time as the growing grape, and stored garlic and onions appear to have the most pungent smell at the season when those in the ground are sprouting: however in this case sprouting takes place in the stored vegetables also. And in general any plant whose root is in layers or fleshy becomes active at the season of sprouting, unless it has been completely dried: for it is the force latent in such plants which is stirred into activity. But the most remarkable phenomenon of the kind is what occurs with bears' grease: it makes active growth at the time of the bear's winter sleep and completely fills the vessels in which it is kept.

Of odours as compared with other sense-impressions.

[14.64] What can be the reason why Democritus, though he assigns various flavours to the sense of taste, yet does not in like manner assign various smells and colours to the senses to which they belong? According to his system he should have done so. Perhaps the same criticism should apply to all who have dealt with the subject: for they all either give the various qualities and distinguish the experiences of this sense alone or at least comparatively neglect the others: thus with colours they distinguish white and black, and with flavours sweet and bitter, yet they make no corresponding classification of smells, but merely class them as 'pleasant' or 'unpleasant.' So too they fail to distinguish different experiences of the sense of touch, whereas several belong immediately to this sense, as hardness, softness, roughness, smoothness.

[65] In sounds still more are there differences, as that between shrill and deep. Again some sense-experiences are simple, some compound. Flavours are simple first in the sense that they cannot be resolved into two components: instances are water oil phlegm blood, and in general anything which floats, like milk, or which causes separation, like vinegar. (Where mixture can be produced by pressure or crushing, it is quite a different matter). Secondly there are flavours which do not readily combine in another sense, namely for human use, or which even spoil one another if they are mixed, as sea-water, or water with soda in it or which has a bitter taste: these spoil wines or other things that are good to drink, unless they are taken at once.

[66] Now the odours which in this sense do not combine are numerous, and, speaking generally, it is the pleasant odours which do not combine with the unpleasant ones. It would indeed be difficult, if not impossible, to find a case in which mixture is an improvement to the odour: in fact one might say that not every combination of one fragrant thing with another will produce such a quality, but though sometimes the effect of such mixture is an improvement, sometimes it may be the reverse, as in the case of perfumes: for while the effect of some admixtures is to remove excessive strength or harshness, in other cases the odour is enfeebled and made, as it were, insipid. With solids however all combinations are possible.

[67] In fact powders are the better, the more ingredients they have. Also the

admixture of wine makes some perfumes and things used for incense more fragrant, for instance myrrh. It appears also that perfume sweetens wines, wherefore some add it in the manufacture, some put it in at the time of drinking. Nor is it unnatural that between these senses, since they are akin and are affected by the same objects, there should be a sort of reciprocity: for, to speak generally, no taste is unaccompanied by smell and no smell is unaccompanied by taste, the reason being that a thing which has no taste produces no smell.

[68] It is also the case that smells actually change along with tastes, for instance in wine and certain fruits. And in some cases, as with grapes, the change takes place earlier, during the flowering period: while in perfumes it occurs only when they have reached their best and are about, as it were, to go off. Almost all perfumes undergo alteration at certain seasons of the year, and this applies specially to the weakest kinds: in the case of those made from flowers this period is that at which the plants from which they are made are in bloom.

[69] [Compound perfumes are made from spices: they bruise and mix a variety of these and shut them up together in a box. Then after a few days they open the box and take out the spice which seems to have the strongest smell; this treatment is repeated at intervals, so that the smell of no one ingredient may overpower the others. And clothes put away with such perfumes acquire a marvellous fragrance.

The perfume made of the Egyptian balanos, though it has not much scent of its own, when mixed with others, especially iris-perfume, improves them]. .

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Concerning Weather Signs



Translated by Arthur F. Hort

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Concerning Weather Signs

[1.1] The signs of rain wind storm and fair weather we have described so far as was attainable, partly from our own observation, partly from the information of persons of credit.

Now those signs which belong to the setting or rising of the heavenly bodies must be learnt from astronomy. [2] Their settings are twofold, since they may be said to have set when they become invisible. And this occurs when the star sets along with the sun, and also when it sets at sunrise. In like manner their risings are twofold: there is the morning rising, when the star rises before the sun, and there is the rising at nightfall, when it rises at sunset.

Now what are called the risings of Arcturus occur at both times, his winter rising being at nightfall and his autumn rising at dawn. But the rising of most of the familiar constellations is at dawn, for instance, the Pleiad Orion and the Dog.

[3] Of the remaining signs some belong specially to all such lands as contain high mountains and valleys, specially where such mountains extend down to the sea: for, when the winds begin to blow, the clouds are thrown against such places, and, when the winds change, the clouds also change and take a contrary direction, and, as they become laden with moisture, they settle down in the hollows because of their weight. Wherefore good heed must be taken to the local conditions of the region in which one is placed. It is indeed always possible to find such an observer, and the signs learnt from such persons are the most trustworthy.

[4] Thus in some parts have been found good astronomers: for instance, Matriketas at Methymna observed the solstices from Mount Lepetymnos, Cleostratus in tenedos from Mount Ida, Phaeinos at Athens from Mount Lycabettus: Meton, who made the cycle of nineteen years, was the pupil of the last-named. Phaeinos was a resident alien at Athens, while Meton was an Athenian. Others also have made astronomical observations in like manner.

[5] Again there are other signs which are taken from domestic animals or from certain other quarters and happenings. Most important of all are the signs taken from the sun and moon: for the moon is as it were a nocturnal sun. Wherefore also the meetings of the months are stormy, because the moon's light fails from the fourth day from the end of one month to the fourth day

from the beginning of the next: there is therefore a failure of the moon corresponding to the failure of the sun.^[6] Wherefore anyone who desires to forecast the weather must pay especial heed to the character of the risings and settings of these luminaries.

Now the first point to be seized is that the various periods are all divided in half, so that one's study of the year the month or the day should take account of these divisions. The year is divided in half by the setting and rising of the Pleiad: for from the setting to the rising is a half year. So that to begin with the whole period is divided into halves:^[7] and a like division is effected by the solstices and equinoxes. From which it follows that, whatever is the condition of the atmosphere when the Pleiad sets, that it continues in general to be till the winter solstice, and, if it does change, the change only takes place after the solstice: while, if it does not change, it continues the same till the spring equinox: the same principle holds good from that time to the rising of the Pleiad, from that again to the summer solstice, from that again to the autumnal equinox, and from that to the setting the Pleiad.

[8] So too is it with each month; the full moon and the eighth and the fourth days make divisions into halves, so that one should make the new moon the starting-point of one's survey. A change most often takes place on the fourth day, or, failing that, on the eighth, or, failing that, at the full moon; after that the periods are from the full moon to the eighth day from the end of the month, from that to the fourth day from the end, and from that to the new moon.

[9] The divisions of the day follow in general the same principle: there is the sunrise, the mid-morning, noon, mid-afternoon, and sunset; and the corresponding divisions of the night have like effects in the matter of winds storms and fair weather; that is to say, if there is to be a change, it will generally occur at one of these divisions. In general therefore one should observe the periods in the way indicated, though as to particular signs we must follow the accepted method.

The Signs of Rain.

[10] Now the signs of rain appear to be as follows: most unmistakable is that which occurs at dawn, when the sky has a reddish appearance before sunrise; for this usually indicates rain within three days, if not on that very day. Other signs point the same way: thus a red sky at sunset indicates rain within three days, if not before, though less certainly than a red sky at dawn.

[11] Again, if the sun sets in a cloud in winter or spring, this generally indicates rain within three days. So too, if there are streaks of light from the south, while, if these are seen from the north, it is a less certain sign. Again, if the sun when it rises has a black mark, or if it rises out of clouds, it is a sign of rain; while, if at sunrise there are rays shooting out before the actual rising, it is a sign of rain and also of wind. Again if, as the sun sinks, a cloud forms below it and this breaks up its rays, it is a sign of stormy weather. Again, if it sets or rises with a burning heat, and there is no wind, it is a sign of rain.

[12] Moonrise gives similar indications, at the time of full moon: they are less certain when the moon is not full. If the moon looks fiery, it indicates breezy weather for that month, if dusky, wet weather; and, whatever indications the crescent moon gives, are given when it is three days old.

13 Many shooting stars are a sign of rain or wind, and the wind or rain will come from that quarter from which they appear. Again, if at sunrise or sunset the sun's rays appear massed together, it is a sign of rain. Also it is a sign of rain when at sunrise the rays are coloured as in an eclipse; and also when there are clouds like a fleece of wool. The rising of bubbles in large numbers on the surface of rivers is a sign of abundant rain. And in general, when a rainbow is seen round or through a lamp, it signifies rain from the south.

[14] Again, if the wind is from the south, the snuff of the lamp-wick indicates rain; it also indicates wind in proportion to its bulk and seize: while if the snuff is small, like millet-seed, and of bright colour, it indicates rain as well as wind. Again, when in winter the lamp rejects the flame but catches, as it were, here and there in spurts, it is a sign of rain; so also is it, if the rays of light leap up on the lamp, or if there are sparks.

[15] It is a sign of rain or storm when birds which are not aquatic take a bath. It is a sign of rain when a toad takes a bath, and still more so when frogs are vocal. So too is the appearance of the lizard known as 'salamander,' and

still more the chirruping of the green frog in a tree. It is a sign of rain when swallows hit the water of the lakes with their belly. It is a sign of storm or rain when the ox licks his fore-hoof; if he puts his head up towards the sky and snuffs the air, it is a sign of rain.

[16] It is a sign of rain when a crow puts back its head on a rock which is washed by waves, or when it often dives or hovers over the water. It is a sign of rain if the raven, who is accustomed to make many different sounds, repeats one of these twice quickly and makes a whirring sound and shakes its wings. So too if, during a rainy season, he utters many different sounds, or if he searches for lice perched in an olive-tree. And if, whether in fair or wet weather, he imitates, as it were, with his voice falling drops, it is a sign of rain. So too is it if ravens or jackdaws fly high and scream like hawks. And, if a raven in fair weather does not utter his accustomed note and makes a whirring with his wings, it is a sign of rain.

[17] It is a sign of rain if a hawk perches on a tree, flies right into it and proceeds to search for lice: also, when in summer a number of birds living on an island pack together: if a moderate number left, it is a good sign for goats and flocks, while if the number is exceedingly large, it portends a severe drought. And in general it is a sign of rain when cocks and hens search for lice; as also when they make a noise like that of falling rain.

[18] Again it is a sign of rain when a tame duck gets under the eaves and flaps its wings. Also it is a sign of rain when jackdaws and fowls flap their wings whether on a lake or on the sea — like the duck. It is a sign of wind or rain when a heron utters his note at early morning: if, as he flies towards the sea, he utters his cry, it is a sign of rain rather than of wind, and in general, if he makes a loud cry, it portends wind.

[19] It is a sign of rain or storm if a chaffinch kept in the house utters its note at dawn. It is also a sign if any pot filled with water causes sparks to fly when it is put on the fire. It is also a sign of rain when a number of millepedes are seen crawling up a wall. A dolphin diving near land and frequently reappearing indicates rain or storm.

[20] If the lesser Mount Hymettus, which is called the Dry Hill, has cloud in its hollows, it is a sign of rain: so also is it, if the greater Hymettus has clouds in summer on the top and on the sides: or if the Dry Hymettus has white clouds on the top and on the sides; also if the south-west wind blows at the

equinox.

[21] Thunder in winter and at dawn indicates wind rather than rain; thunder in summer at midday or in the evening is a sign of rain. If lightning is seen from all sides, it will be a sign of rain or wind, and also if it occurs in the evening. Again, if when the south wind is blowing at early dawn, there is lightning from the same quarter, it indicates rain or wind. When the west wind is accompanied by lightning from the north, it indicates either storm or rain. Lightning in the evening in summer time indicates rain within three days, if not immediately. Lightning from the north in late summer is a sign of rain.

[22] When Euboea has a girdle about it up to the waist, there will be rain in a short space. If cloud clings about Mount Pelion, it is an indication of rain or wind from the quarter to which it clings. When a rainbow appears, it is an indication of rain; if many rainbows appear, it is an indication of long-continued rain. So too is it often when the sun appears suddenly out of cloud. It is a sign of rain if ants in a hollow place carry their eggs up from the ant-hill to the high ground, a sign of fair weather if they carry them down. If two mock-suns appear, one to the south, the other to the north, and there is at the same time a halo, these indicate that it will shortly rain. A dark halo round the sun indicates rain, especially if it occurs in the afternoon.

[23] In the Crab are two stars called the Asses, and the nebulous space between them is called the Manger; if this appears dark, it is a sign of rain. If there is no rain at the rising of the Dog or of Arcturus, there will generally be rain or wind towards the equinox. Also the popular saying about flies is true; when they bite excessively, it is a sign of rain. If a chaffinch utters its note at dawn, it is a sign of rain or storm, if in the afternoon, of rain.

[24] When at night a long stretch of white cloud encompasses Hymettus below the peaks, there will generally be rain in a few days. If cloud settles on the temple of Zeus Hellanios in Aegina, usually rain follows. If a great deal of rain falls in winter, the spring is usually dry; if the winter has been dry, the spring is usually wet. When there is much snow in winter, a good season generally follows.

[25] Some say that, if in the embers there is an appearance as of shining hail-stones, it generally prognosticates hail; while, if the appearance is like a number of small shining millet-seeds, it portends fair weather, if there is wind at the time, but, if there is no wind, rain or wind. It is better both for plants

and for animals that rain should come from the north before it comes from the south; it must however be fresh and not briny to the taste. And in general a season in which a north wind prevails is better and healthier than one in which southerly winds prevail. It is a sign of a long winter when sheep or goats have a second breeding season.

The Signs of Wind.

[2.26] Such then are said to be the signs of rain. The following are signs of wind and breezes. If the sun rises with a burning heat but does not shine brilliantly, it is a sign of wind. If the sun has a hollow appearance, it is a sign of wind or rain. If it blazes with a burning heat for several days, it portends long-continued drought or wind. If at dawn its rays are parted, some pointing to the north and some to the south, while the orb itself is clearly seen between, it is a sign of rain and wind.

[27] Also black spots on the sun or moon indicate rain, red spots wind. Again, if, while a north wind blows, the horns of the crescent moon stand out straight, westerly winds will generally succeed, and the rest of the month will be stormy. When the upper horn of the crescent moon is bent, northerly winds will prevail for that part of the month: when the lower horn is bent, southerly winds will prevail. If however the horns up to the fourth day point straight and have not a graceful bend inwards but round to a circle, it will generally be stormy till the middle of the month. If the moon is dusky, it indicates rain, if fiery, it indicates wind.

[28] It is a sign of rain when gulls and ducks, whether wild or tame, plunge under water, a sign of wind when they flap their wings. Wherever the bird called kepphos flies during a calm, it is sign of coming wind. If sparrows in winter begin to be clamorous at evening, it is a sign of a coming change or of a fall of rain. A heron flying from the sea and screaming is a sign that a breeze is coming: so is it in general a sign of wind when he screams loudly.

[29] A dog rolling on the ground is a sign of violent wind. A number of cobwebs in motion portends wind or storm. The ebb-tide indicates a north wind, the flowing tide a wind from the south. For, if the flowing tide sets from the north, there is a change to the south, and if an ebb-tide comes from the south, there is a change to the north. It is a sign of wind when the sea has a swell or promontories moan or there is loud noise on the beach. Now the north wind has less force as it ceases to blow, the south wind as it begins. A mock sun, in whatever quarter it appears, indicates rain or wind.

[30] The fifteenth day after the winter solstice is generally marked by southerly winds. If there is a northerly wind, everything gets dried up, if a southerly, there is abundant moisture. If, while a south wind is blowing, glued

articles make a crackling sound, it indicates a change to a south wind. If the feet swell, there will be a change to a south wind. This also sometimes indicates a hurricane. So too does it, if a man has a shooting pain in the right foot. The behaviour of the hedgehog is also significant: this animal makes two holes wherever he lives, one towards the north, the other towards the south: now whichever hole he blocks up, it indicates wind from that quarter, and, if he closes both, it indicates violent wind.

[31] If a mountain . . . , it indicates wind from the north. If at sea during a wind there is a sudden calm, it indicates a change or an increase of wind. If promontories seem to stand high out of the sea, or a single island looks like several, it indicates a change to south wind. If the land looks black from the sea, it indicates a north wind, if white, a south wind. A halo about the moon signifies wind more certainly than a halo about the sun: but in either case, if there is a break in the halo, it indicates wind, which will come from the quarter in which the break is. If the sky is overcast in whatever quarter the sun is first seen, there will be wind from that quarter. Light clouds in summer-time indicate wind.

[32] If lightning comes from all sides, it indicates rain, and from any quarter from which the flashes come in quick succession there will be wind. In summer from whatever quarter light and thunder come, there will be violent winds: if the flashes are brilliant and startling, the wind will come sooner and be more violent; if they are of gentler character and come at longer intervals, the wind will get up gradually. In winter and autumn however the reverse happens, for the lightning causes the wind to cease: and, the more violent the lightning and thunder are, the more will the wind be reduced. In spring I consider that the indications would not so invariably have the same meaning, — and this is also true of winter.

[33] If, while a south wind is blowing, there comes lightning from the north, the wind ceases. If there is lightning at dawn, the wind generally ceases on the third day: other winds than a south wind however do not cease till the fifth seventh or ninth day, though a wind which got up in the afternoon will cease sooner. A north wind generally ceases in an odd, a south wind in an even number of days. Winds get up at sunrise or moonrise. If the rising sun or moon have caused the wind to cease, presently it gets up again with more force, and winds which begin to blow in the day-time last longer and are

stronger than those which begin at night.

[34] If periodic winds have been blowing for a long time, and a windy autumn follows, the winter is windless: if however the contrary happens, the character of winter is also reversed. From whatever quarter cloud streams out from a mountain peak, wind will blow in the direction thus indicated. Clouds which cling to the back of the mountain will also produce wind from the back of it. If there is a girdle of cloud halfway up Mount Athos, and if mountains in general wear such a girdle, there will generally follow a southerly wind. Comets usually indicate wind, and, if there are many of them, drought is also indicated. After snow a south wind, after hoar-frost a north wind generally blows. Snuff in a lamp indicates wind or rain from the south.

[35] The points from which the winds come are as they are given in the figure. The winds which most often come on the top of other winds while these are still blowing are the north wind (aparktias), the north-north-east and the north-west. When however the winds are not dispersed by one another but die down of their own accord, they change to the next winds on the figure, reckoning from left to right according to the course of the sun. When the south wind begins to blow, it is dry, but it becomes wet before it ceases: so too does the south-east wind. The east wind, coming from the quarter where the sun rises at the equinox, is wet: but it brings the rain in light showers.

[36] The north-east and south-west are the wettest winds; the north the north-north-east and the north-east bring hail; snow comes with the north-north-east and north. The south, the west, and the south-east winds bring heat. Some of these have their effect on places which they strike as they come from the sea, others on places which they visit as they come over land. The winds which more than any others make the sky thick with cloud and completely cover it are the north-east and the south-west, especially the former. While the other winds repel the clouds from themselves, the north-east alone attracts them as it blows. Those winds which chiefly bring a clear sky are the north-north-west and the north-west, and next after them the north. Those which most have the character of a hurricane are the north the north-north-west and the north-west.

[37] They acquire this character when they fall upon one another as they blow, especially in autumn, but to some extent in spring. Those which are accompanied by lightning are the north-north-west the north-west the north

and the north-north-east. If at sea a quantity of down is seen blown along, which has come from thistles, it indicates that there will be a great wind. Wind may be expected from any quarter in which a number of shooting stars are seen. If these appear in every quarter alike, it indicates many winds.

Such then are the signs of winds.

[3.38] The following are signs of storm. The sun becoming obscured as it sinks indicates storm. And, according as its orb is divided as it sets, so the succeeding days turn out; for instance, a third or a half of the orb may remain visible. If the horns of the moon point straight up till the fourth day, and if it rounds to a circle, it will be stormy till the middle of the month. If cranes fly early and in flocks, it will be an early winter; if they fly late and for a long time, it will be a late winter; and, if they wheel as they fly, it indicates stormy weather.

[39] It is a sign of storm when geese make more clamour than usual or fight for their food; so too is it when a sparrow or chaffinch twitters at dawn. It indicates a storm when the goldcrest goes into holes and hides itself; so also when the redbreast does the same. It is a sign of storm when the crow caws twice in quick succession and then a third time; also when the crow or raven or jackdaw makes its call late. It is a sign of a great storm when a white sparrow or swallow is seen, or a white specimen of any other bird which is not usually white, even as the appearance of a large number of such birds of a dark colour signifies rain.

[40] It is also an indication of storm when birds flee from the sea. A chaffinch uttering its note in an inhabited house is a sign of storm. All the signs which indicate rain bring stormy weather, that is to say, snow and storm, if not rain. If the raven utters a great variety of sounds in winter, it is a sign of storm. Jackdaws flying from the south are a sign of storm, and so are cuttle-fish. It is a sign of storm when a loud voice is heard in harbour, which is re-echoed many times. It is a sign of a stormy season when a number of jelly-fish appear in the sea. It indicates an early winter when the breeding season of sheep begins early.

[41] If in autumn sheep or oxen dig holes and lie keeping their heads close to one another, it indicates a severe winter. They say that in Pontus when Arcturus rises, (the cattle) face northwards as they graze. It is a sign of storm when cattle eat more than usual and lie down on their right sides. So is it

when the ass shakes his ears, or when sheep or birds fight for their food more than usual, since they are then trying to secure a store against winter: also when mice squeak and dance.

[42] A bitch digging holes with her paws and a tree-frog croaking alone at early dawn are signs of storm: it indicates storm when a number of the worms called 'the earth's entrails' appear. It is a sign of storm if the fire refuses to catch, or if a lamp refuses to light: while, if much ash is formed, it is a sign of snow. If a lamp burns steadily in fine weather, it is a sign of storm: so is it if in winter-time dark snuff forms: if it is, as it were, full of numerous millet-seeds, there will be stormy weather; and if these in fine weather appear in a circle round the flame, it is a sign of snow.

[43] If the 'Ass's Manger' shrinks in size and becomes dark, it is a sign of storm; also if there is vivid lightning which does not remain in the same quarter. If at the setting of the Pleiad there is lightning over Parnes, Brilessus and Hymettus — when it appears over all three mountains, it indicates a great storm; when over the two lesser heights, a less violent storm; when over Parnes alone, fine weather. Again, if during a storm a long cloud stretches over Hymettus, it signifies that the storm will increase in force. It is a sign of storm when Athos, Olympus and mountain-peaks in general are covered with clouds. If during fine weather a cloud appears in the sky stretching a long way and torn to shreds, stormy weather will continue.

[44] If the autumn is unusually fine, the succeeding spring is usually cold. If winter begins early, it ends early and there is a fair spring; if the reverse, spring will also be late. If the winter is wet, the spring will be dry, if the winter is dry, the spring will be fair. If the late summer is satisfactory, the sheep will generally suffer from hunger. If the spring and summer are cold, the late summer and autumn will be stifling hot and windless.

[45] If the kermes-oak fruits well, there follows a long succession of storms. If a cloud stands upright on a mountain-peak, it indicates storm; whence Archilochus' lines "Mark you, Glaucus; deep ocean is now stirred up with waves, and about the heights of the Gyrae there rises a cloud erect, the sign of storm." If the clouds are of uniform colour, like a white membrane, it is a sign of storm. When, as some clouds are motionless, others move towards them while they remain at rest, it is a sign of storm.

[46] If the sun in winter after gleaming out is again obscured, and this is

repeated two or three times, it will be stormy all day. If the star Hermes appears in winter, it indicates cold, if in summer, heat. When in fine weather bees do not fly long distances, but fly about where they are, it indicates that there will be a storm. The howling of a wolf indicates a storm within three days. When a wolf approaches or enters cultivated ground in the season of winter, it indicates that a storm will come immediately.

[47] It is also a sign of great storms and heavy rain when many wasps appear in autumn, or when white birds approach cultivated lands; and in general when wild creatures approach such lands, it indicates a north wind and a severe storm. If the western side of Parnes and the side towards Phyle are blocked with clouds during a north wind, it is a sign of storm.

[48] When there is a severe heat, generally there is compensation and a severe winter follows. If there is much rain in spring, it is followed by severe heat in low-lying districts and valleys; so that one should mark how the season begins. If the autumn is exceedingly fine, generally the spring is cold: if the spring is late and cold, the summer goes on late and the autumn is usually scorching hot.

[49] When the kermes-oak fruits exceedingly well, it generally indicates a severe winter, and sometimes they say that this sign is followed by droughts. If one takes a mole and puts it in a tub, the bottom of which has been covered with clay, it indicates by the sounds which it utters wind or fine weather. There is also the sign of storm which is popularly recognized everywhere, namely when mice fight for the possession of chaff and carry it about.

The Signs of Fair Weather.

[4.50] The following are signs of fair weather. If the sun rises brilliant but without scorching heat and without showing any special sign in his orb, it indicates fair weather. The same may be said of the moon when it is full. If in winter that part of the sky into which the sun goes down is clear, it is a sign of fair weather, unless on the preceding days that part has not been clear, though it was clear above the horizon: in that case the prospect is uncertain. It is also a sign of fair weather, if during stormy conditions that part of the sky into which the sun sets is clear; and also if, in winter at the time of setting, the sun has a pale colour.

[51] Again, it indicates fair weather if the outline of the moon of the third day is bright; also if the 'Ass's Manger' is clear and bright. If the halo forms and disappears evenly, it is a sign of fair weather. Light clouds in winter are a sign of fine weather. It is a sign of fine weather when Olympus Athos and in general the mountains which give signs have their tops clear: so too is it, when clouds encompass them at the sea-level. Also when after rain the clouds have a bronze colour towards sundown: in that case there will generally be fair weather the next day.

[52] When there is mist, little or no rain follows. When cranes take flight and do not come back, it is a sign of fair weather: for they do not do so till they see a clear sky before them as they fly. It is a sign of fair weather when during a storm an owl makes a low hoot, or at night during a storm it utters a low sound. If the sea-owl utters its note during a storm, it indicates fair weather, if during fair weather, it indicates a storm. It is a sign of fair weather if a solitary raven makes a low croak, and, after croaking three times, repeats the sound again and again. . . .

[53] If the crow caws thrice directly the dawn appears, it indicates fair weather, as also if it makes a low note in the evening during a storm. It is a sign of fair weather if a goldcrest flies out abroad from a hole or from a hedge or from its nest. Again, if during a storm from the north there is a white gleam from that quarter, while in the south a solid mass of cloud has formed, it generally signifies a change to fair weather. Again when the north wind (Boreas) as it begins to blow violently stirs up a number of clouds, it indicates fair weather.

54 When sheep begin to breed late, it is a sign which fulfils itself in fair weather. So is it when an ox lies on his left side, and also when a dog does the same: if they lie on the right side, it indicates storm. The appearance of a number of cicadas indicates that the season will be unhealthy. If a lamp burns quietly during a storm, it indicates fair weather. So also if it has on the surface an appearance like shining millet-seeds: also if a bright line surrounds the lamp-nozzle.

[55] The fruiting of the mastich gives signs as to the seasons of sowing: it takes place at three several periods, which indicate respectively the time for the first the second and the third sowing: and according as one or the other of these fruiting-times turns out best and produces the most abundant fruit, so too will be the success of the corresponding time of sowing.

Miscellaneous Signs.

[56] The following signs are said to affect either the whole year or whole periods of it. If at the beginning of winter there is dull weather followed by heat, and these conditions are dispersed by wind without rain, it indicates that towards the spring there will be hail. Again, if after the spring equinox mists come down, it is an indication of breezes and winds by the seventh month, reckoning inclusively. Those mists which come down when the moon is in its first quarter indicate breezes for that period, those which come down when the moon is in its third quarter indicate rain. And the more mists come down when the moon is assuming either shape, the more certainly is the result just mentioned indicated.

[57] Also the winds which accompany the falling of the mists are significant: if the breezes come from the east or south, rain is indicated; if from the west or north, breezes and cold weather. And the stars which the Egyptians call 'comets' indicate not only the conditions just mentioned but also cold weather. In the case of the rising of the stars the indication, as in the case of also of the equinoxes and solstices, is given not at the actual time but a little earlier or later.

On Winds



Translated by James G . Wood

FROM what elements, in what manner, and through what causes the physical constitution of the winds derives its origin has been already considered. We must now endeavour to show that each wind is accompanied by forces and other conditions in due and fixed relation to itself; and that such conditions in fact differentiate the winds one from another.

Now, the differences that exist involve, and consist of, such conditions as the following: — for instance, greater or less volume, cold, heat, or (in more general terms) storm or calm, wet weather or clear weather; and, again, their frequency or infrequency; their occurrence season by season, or not at all seasons; and whether they are continuous and uniform, or intermittent and variable. In a word, they involve every condition that arises in the heavens, the air, the earth, and the sea by reason of the blowing of the wind. Our enquiries in fact follow the same lines and concern the same matters as do the studies of animals and plants.

Now, as each wind has its own particular place of origin, and this is, as it were, of its essence, it is from this that the distinctive features and peculiar forces of each generally arise; such as, in the first place, the greater or less volume; higher or lower temperature; greater or less amount, and [secondly] the majority of other physical conditions.

Winds from opposite quarters have, at the same time, both identical and opposite characteristics; and there is no inconsistency in this. Take, for instance, the N. wind and the S. wind. They both are strong winds, and blow longer than any others; and this is because the greatest amount of air is compressed towards the North, and towards the South; those parts being to the right and the left of the path of the sun, from its rising to its setting; for here the air is expelled by the power of the sun; and so the air [there] has the greatest density, and the greatest amount of cloud. A great quantity of air being thus collected at each point, a greater and more continuous flow of air thence occurs with greater frequency; and from these causes, these winds

derive volume, continuance and duration, and other such conditions.

But the coldness of the one, and the heat of the other, appear to be most clearly due to the place of origin of the particular wind; for the Northern parts of the world are cold; the Southern parts warm; and the air that flows from either quarter has the corresponding character. Now, the less open the surrounding district is, so in proportion is the current less diffuse; while that which is borne through a narrow space and with more violence is colder; but that which is poured abroad into the wider space beyond becomes more moderate in its rate of motion. For which reason also the S. wind is colder there than it is with us; and even, as some say, colder than the N. wind.

But the change [in its temperature] makes itself more appreciable as the place is warm to begin with.

Indeed this [variability] is common practically to all winds. Whether the wind from either [of two opposite quarters] produces wet or clear weather, whether it is squally or steady, recurrent or continuous, uneven or even, or again its intensity in one case at its commencement, in another as it ceases, are matters which are more directly referable to the distance apart of the places [of origin and of observation]. For wherever any particular wind blows from, there it is accompanied by clear weather; but to whatever place it impels the air there it is accompanied by clouds and rain. This is the reason why the N. wind, and even more so the monsoon, brings rain to those who live towards the South and the sunrising; while the S. wind, and generally speaking all winds which blow from that quarter, bring rain to those who live towards the North.

And, in this connection, it is not of slight, but of the greatest, importance that the places [where such effects are observed] should have a sufficient elevation. Wherever the clouds strike and take up a position, there also is a source of rainfall. For which reason, of several places close together, some are wet in the presence of some winds; others in the presence of others; rain however has been elsewhere spoken of at greater length.

It is from the same cause that the N. wind is strong immediately it begins to blow; while the S. wind is strong as it is leaving off; on which facts is founded the proverbial advice about sailing. For the former immediately as it were attacks those who dwell in the North; but the latter stands far aloof; but when volume has been gathered, then comes the rush from afar, although after

a longer delay. And so conversely in Egypt and places thereabouts the S. wind is strong at the beginning; whence there they reverse the proverb.

In like manner, with them, the S. wind particularly exhibits the characteristics of recurrence, steadiness, continuousness and regularity, for such is always the character of each wind among those who are near its place [of origin]; but when it reaches those who are afar, it is irregular and disorganised.

The causes which have been mentioned must be understood to be the causes of these latter facts as well; and they are plainly active even in other places of less extent and less distant from each other [than Greece and Egypt]; although this might seem unlikely. [But it is not so really]; for the S. wind is always accompanied by clear weather in the place of its origin; but the N. wind, whenever there is a great storm, produces cloud in the parts near [its place of origin], but clear weather beyond. And the cause of this is, that by reason of its force it sets in motion a great quantity of air; but the congelation produced by it takes place before it can effect the propulsion of the air so set in motion, and the clouds remain fixed by reason of their weight; and so the force of the wind, rather than its low temperature, is passed on to the parts beyond, and further in advance; and produces the result we have mentioned. The S. wind on the other hand having substance to a less degree, and not congealing it, but propelling it, brings clear weather to those near its place of origin; but it is always more rainy beyond, and blows with force rather when ceasing, than when commencing, because it propels before it only little air at the beginning, but more as it advances; and the air, by being gathered together, becomes cloudy, and by condensation becomes moist.

Moreover, it makes a difference whether the active principle at the beginning be greater or less; for when that is small, the wind is accompanied by clear weather; and when it is great, it produces cloudy and wet weather; because [in the latter case] it compresses together a greater volume of air.

Now, they say that it is not true, but false, that the S. wind [as some assert] does not blow at all in that part of Egypt which is near the sea, nor for the space of a day and a night's journey there from, while it blows fresh in the parts above Memphis, and likewise in places as far from the sea as the distance just mentioned. However, it clearly does not blow as much there, but less; and the reason of this is, that lower Egypt lies low and flat; so that there

the wind may pass overhead, while Upper Egypt is more elevated. Indeed the proximity of its place of origin demands that the force of the winds should be exhibited there; for, such phenomena as these, which happen according to the course of nature, are mostly referable to local causes.

And these winds continue throughout accompanied by cloudy weather, or by fine weather (as the case may be), according to what has just been said.

The proposition that the N. wind succeeds the S. wind, but 9 that the S. wind does not succeed the N. wind, must be considered with reference to the principle which assigns particular phenomena to particular localities. For this law operates with us, and generally with all those who live towards the North; but with those who live towards the South the converse takes place. The cause, however, is the same in both cases. For to the former the N. wind is close at hand; and so is the S. wind to the latter; so that they produce sensation directly that they begin to blow; but make their way slowly to parts farther on. Now, the Northerly and Southerly winds being, as has been said, the most frequent, each of them is subject to a fixed rule, as it were, determining the periods during which they generally blow in regular order. The N. winds blow both in Winter and Summer, and in the late Autumn until just before the close. Southerly winds blow in Winter and at the commencement of Spring, and the end of the late Autumn. For the motion of the sun co-operates with each, and equilibrium is restored by the air flowing back again. For, whatever amount of air may have been expelled [by N. winds] during the Winter (and the N. winds generally blow then more frequently than the S. winds) and again before Summer by the monsoons and succeeding winds, it is given back to these parts in the Spring and at the close of the late Autumn, and about the setting of the Pleiades in due course. And so it is that the very fact, the assumed non-existence of which has caused some to wonder why it is that there are monsoons from the North but not also from the South, appears really to happen. For the S. winds of the Spring (which they call “white S. winds” from their being usually accompanied by clear weather) are, as it were, monsoons; but at the same time, by reason of their being removed far off from us, they have not been recognised as such; while the N. wind is immediately present to us.

We will now consider the nature of the Monsoon.

Why it blows at this particular season, and for a particular number of days,

and why it ceases as the day closes in, and almost universally does not blow at night, are to be explained on the following principles. The movement of the air is caused by the melting of the snow. When, then, the sun begins to break up the frost, and acquire the mastery, the “precursors” blow; and then follows the monsoon. And the cause of its ceasing with the decline of the sun, and not blowing at night, is that the snow ceases to thaw as the sun goes down, and does not melt at all at night when the sun has set. However, [the monsoon] does blow sometimes [at night] when the thaw has been greater than usual; for this must be taken to be the cause of this exceptional occurrence. For at one time it is strong, and continuous; at another weaker and intermittent; and this is because the thaw is irregular. And the moment varies as the mass of matter. And it may be that this irregularity is due to local causes, such as proximity and distance and other variations.

If, then, it is true (as some and particularly the dwellers in Crete say) that the winters are more severe, and more snow falls than formerly — (as proof of which they allege that formerly the hills were inhabited and produced both corn and fruit, the land having been planted and cultivated for that purpose; that there are in fact on the hills of the Ida range and on others, plateaus of considerable extent of which now-a-days they cultivate not one, because they are unproductive; while formerly as has been said they not only cultivated them, but also dwelt upon them so that the Island had a large population; and that at that time showers occurred, but much snow and storm did not) — if, I repeat, this is true which they allege, it follows that the monsoon also has greater duration [now than formerly].

But if the monsoon did ever fail altogether, and Aristæus (as they tell us in the Mythologies) regained it by performing those celebrated sacrifices to Zeus in Keos, it would follow that the parts exposed to the weather were not then so subject, as they are now, to shower and to snow. But if rain and snow are liable to variations, either subject or not subject to some fixed law, there would be, synchronously with these variations, cessation and mutation of the winds.

And it would seem strange if those in the South had not some such relief as this, year by year; considering that their situation is so much hotter.

This then is plain except.... the fruit;.... some are beforehand; others are insensible. These matters must be enquired into.

Now if the genesis of all the winds be the same, and be produced by the same agents through the acquisition of some matter, the sun would probably be that which produces them.

But perhaps that is not absolutely true; but rather that sublimation is the producing cause, and the sun is, as it were, the co-operative. But the sun appears both to set the winds in motion, and to lull them to rest, at its rising; and so [at that time] they often increase or die away. This however is not universally true; but in whatever cases it happens, the following must be understood to be the cause. Whenever the sublimed moisture is less than a certain amount, this the sun overpowers and absorbs; and so causes the wind to cease; but when it is in excess, it makes the movement of the wind more violent by the addition of its own impulse.

Sometimes also at sunset the sun makes the wind to cease, by withdrawing the repulsive motion which it gave earlier [in the day]. And it is clear that this motion has a due proportion [to the force of the sun]; so that on the one hand it does not become spent too soon; and on the other hand the wind is not kept longer in motion by it [than while the sun is above the horizon].

But there is nothing to prevent some winds from blowing even more as the sun goes down; such for instance as those winds which are restrained by heat, and as it were dried up and burnt up by it. And so at noon, for the most part, [the movements of such winds] lose their force; but gather strength as the sun goes down.

The moon produces the same results; but not in the same degree; for it is as it were a sun of low power; for which reason also the endings and beginnings of the lunar months are more terrible at night, and are more stormy [than other parts of the month].

Thus then it happens that winds sometimes rise, sometimes fall, at sunrise; and similarly at sunset; for sometimes it stops them altogether; and sometimes it, as it were, lets them loose. And it would be well to consider whether these phenomena happen according to a regular concurrence, as is the case with phenomena which are to be observed at the risings and settings of the stars.

And from the same cause it is that calms occur very frequently both at midnight and at noon; for if it happens that the air under such conditions at one time conquers, and at another is conquered by, the sun. At midnight it conquers, because the sun is then most distant; at noon it is conquered; but

whether conquering or conquered it comes to a halt; and a halt is a calm.

It is a fact also that the cessations of winds occur according to a law. For the winds begin to blow either at dawn or at sunset; and those which begin from dawn cease whenever they are conquered; and they are conquered about mid-day; but those which begin from sunset cease whenever the sun ceases to have power; and that happens at midnight.

Now if some marvel, as at an inexplicable fact, that winds, although they are caused by the impulse of the sun, and, in a word, by heat, should be cold, that which seems to them inexplicable is not a fact at all. For the wind is to be attributed not to the sun simply, but to the sun as, as it were, a co-ordinate cause; nor is it true that movement produced by heat is in all circumstances accompanied by heat and fiery; but [it is so] if it occurs in a particular way. For when a discharge is in the mass and in immediate contact with the discharging agent, it is hot. But when it takes place little by little, and through some narrow channel, then although it is hot in itself, yet the air set in motion by it renders the discharge such [as regards temperature] as the air itself may happen to have been in the first instance.

The breath from the mouth is a sufficient example of this. Some say it is both hot and cold; but they are wrong. It is always warm; the difference is in the manner of emission and escape. For when the mouth is agape, and the breath is sent out in a volume, it is warm; but if it comes out through a narrow opening with more force, and repels the air next to it, and that repels the air next beyond, then if these latter are cold, the current and motion becomes cold also. The same thing happens also in the case of the winds. For when the first movement is through a narrow space, the wind itself is not cold at first; but whatever may happen to be the condition, as regards heat and cold, of the air set in motion by it, such it becomes; if there was heat, it becomes hot; if there was cold, it becomes cold. For this reason winds are warm in Summer but cold in Winter. For according to the particular season such is the air.

It is clear where by reason of the.... it happens to be as it were burnt up. For if where.... wind and desire.... hot or cold nevertheless.... difference of the air.... such as it may be and it appears to be..... And in the actual places of its origin and those adjacent, the current becomes hot; but as we advance further, it is not so to the like extent. Sometimes also a wind coming to us from other parts, if it be from torrid places and such as have a close and burnt up air,

appears excessive in its heat. For which reason travellers on the road, and men engaged in the harvest, often die, by reason of such winds, in the fields and in close suffocating places; partly from the air which was there before operating together with the other, and partly from the excess produced by the current and influx.

The following consideration shows that this wind-movement of the air is not simply due either to its being set in motion by itself, or to its being forced into motion by heat. If it were set in motion by itself alone, then as it is cold by nature, and of the character of vapour, the motion would be downwards; but if by heat alone the motion would be upwards; for that is the natural direction of fire. But, as a fact, the motion is as it were compounded of both; for the reason that neither can [entirely] overcome the other.

To this universally general principle, that such as is the air, or the state of “sublimation” in particular places, such will be the winds in regard to cold, the following facts bear further testimony. All such winds as blow from rivers and lagoons are cold, because of the dampness of the air. For as the sun fails [by its inability to pierce the mist] the air becomes colder and the mist at the same time more dense, particularly if the latter arises close by. So that whenever it strikes the body, a sort of shivering is produced.

Un this account also hollow places, and such as are well sheltered from external winds, are chilled by winds arising locally. For the air raised by the sun has neither the natural capacity, nor the power, to remain stationary; and so is borne along and produces a current. And therefore breezes from rivers and lagoons, and generally such as blow off the land, blow at dawn, when the mist is cooling down from the failure of heat. For it is reasonable that this kind of breeze should arise particularly from calm. And they blow still more when there are drizzling rains and moderate showers; for then there is additional matter everywhere for their production; and breezes off the land particularly occur after such conditions.

The Nile is the only river from which breezes do not appear to blow; or if they do, they are very slight, and the reason is that both the place from which, and the place to which, it flows are warm; and breezes exist when moisture is condensing. For which reason also, in no circumstances do breezes come from any one of the rivers in Libya. For they are warm throughout, and it is certain that the same is the case with the rivers about Babylon and Suza, and tropical

places generally. And yet they say that the air becomes marvellously chilled there towards dawn. This certainly must be enquired into; for it may be that although the air does become cold, yet it cannot advance and cause a breeze, because the places which would at once receive it are hot.

The “alternating winds” are produced by the land breeze and similar breezes; the damp air being gathered together. For the alternating wind is a sort of reflux of the wind, like the reflux of the water in tidal straits. For when it is gathered up and has acquired volume, it changes again to the contrary direction. These winds occur mostly in valleys, and where “off-shore” breezes blow. There is good reason for both these facts. For in valleys the air as it pours in will be collected; but in open places it is dispersed. Winds too from the land are naturally weak; so that they cannot force their way far. And the reflex action is in proportion to the duration and force with which the winds off the land blow; and it corresponds with them also as to the time of its occurrence, according as these winds blow later or earlier.

There is also a sort of rebound of the winds, so that they blow back against themselves, when they fail to surmount the places against which they blow by reason of the superior height of such places. Thus it happens that clouds are sometimes borne, by an under-current, in directions contrary to the winds.

As for instance in *Ægæa* of Macedonia, the clouds are carried towards the North, while the N. wind is blowing. The reason of this is that, the hills around Olympus and Ossa being high, the winds fall on and do not surmount them, but are turned back in the opposite direction; so that the clouds, being at a lower level, are also carried in the contrary direction. The same thing happens in other places as well.

Sometimes also, just before the monsoon, contrary winds blow in the opposite direction to the [then prevailing] N. wind by a reversal of the latter; so that by means of them the ships make a return voyage; as happens in fact on the passage from Chalkis to Oropus; and these winds they call “return N. winds; and this especially happens when the winds are very fresh; for they can make the longest reach at times when the reverse wind has full power.

Sometimes also it happens that, by striking on a resisting object, the wind is parted so that it flows hither and thither; even as water flowing from one and the same opening is divided by an obstacle into two streams.

Altogether there are numerous changes in the winds produced by local

causes; particularly the becoming more violent, or more calm, according as they blow through a limited, or an open space. For that which blows through a limited space is always more violent and fresh; just like a stream of water; for when collected it has more force and propulsive power; for which reason, when elsewhere there is a calm, there is always a wind in narrow gorges; for the air cannot remain there by reason of its quantity; and the movement of air is wind. So also when the winds are shut in, or meet in narrow passages and gateways, they blow with keenness; and windows always draw and produce a current. Of all these and such like phenomena there is one and the same cause, namely that which has been mentioned.

Again, some places by reason of their situation in valleys, and being surrounded by greater elevations, happen to be entirely free from winds, although they are near, or nearer than other places, to the sources of the winds; while those that are further off are windy; as happens in Thessaly and Macedonia at the time of the monsoon. For it does not blow at all, practically, in these parts; but it blows freshly enough in the far distant Islands. And the reason is that the former places lie in valleys and are well sheltered; but the Islands have nothing to oppose the current of the wind. And the monsoon, and generally every wind, is prevented from blowing either by distance (for it cannot extend further by reason of the length of the course), or by the interposition of some objects; or thirdly, if a wind of local origin blows the other way with more force.

Now that the rising of the monsoon, and the blowing of the alternating winds over Macedonia, occur simultaneously at a particular time, must be considered as due to some connecting cause. For the winds everywhere cease at mid-day by reason of the sun; but rise again as the afternoon comes on. And it happens that both the rising of the alternating winds against the off-the-land winds, and the rising again of the monsoon take place at the same period. For I suppose we must not credit the rebound of the wind from Olympus and Ossa with causing the monsoon unless.... or very moderate. However we must endeavour accurately to ascertain in all cases the connecting causes of concurrent phenomena.

There is another matter which might appear strange and unaccountable; that is, why it is that among elevated places, those which face a particular wind do not experience that wind at all; but those which are sheltered from a

particular wind do feel it, and that not to a moderate extent but severely. For instance, Plataea of Boeotia lies towards the North, and there the N. wind is but a light air; but the S. wind is strong and stormy, although Kithaeron stands as a barrier before the place. Again, before the monsoon the alternating winds pass by the low lying lands of Euboea; but at Karystos they blow in such a way, that their force is extraordinary. Once more, in that part of Kurias which is called Phæstum, which lies towards the South and is high and precipitous, a marvellous wave breaks in from the sea; but there is no wind; but the ships even are anchored to the....; the parts in the neighbourhood having no harbour; and there they can watch events. And the reason why the wind does not reach the land is that the air [on the land] does not give place, or flow away by reason of the height towards.... not surmounting. But that the air must always move away, and must not remain stationary [in order to admit of a wind blowing] is plain. For in rooms whenever one closes the [inner] doors, the current of air through the windows is reduced; for the room being full of air, and not providing an exit [for the air already within it], does not allow the outer air to enter. For the movement of air is towards a void; and for this reason the expression “draught” is not well used.

— But the reason why places sheltered from the N. wind (or generally from any particular wind), feel [that] wind more [than places not so sheltered] is that the wind is as it were piled up, and at last overflows, and falls on the place in a mass; for whenever it falls it comes down in a mass like a cataract. And it is in such places that squalls occur; for here are swirlings and massing together; so that when it bursts forth it comes down as it were with a blow. For when the wind is massed together, it is violent and non-intermittent; as also is the case with whirlwinds.

Such and the like are the occurrences due to local causes. But there are many things which occur in many different places, to speak of which separately would require a volume.

The following phenomena have relation to all winds in common, being such as in each case afford indications when the wind is about to blow.

The air varying in its opacity in proportion to its density or rarity, or in proportion to its heat or cold, or in proportion to some other condition, always indicates the coming current. For the conditions of the air sympathise with the movements of the wind, and precede the winds in affecting our senses.

So — also in regard to the sea and waters, it is possible to observe the same indications; since the waves lifting and breaking [before the wind comes] indicate that winds are coming. But they are propelled not without intermission, but at intervals; and one wave propelled by the wind propels another; and is again propelled by another puff of wind, when the first had died away; and so being thus constantly propelled they arrive at the shore. But when that which is set in motion has arrived, it is clear that that which set it in motion will presently come.

It also happens that the waves continue after the winds have ceased; for they die down and fade away later; because that which is more difficult to set in motion is also more difficult to bring to a state of rest.

The following also are common indications of the majority of winds; such as the appearance of shooting stars, and the appearance, fading away, and breaking up of parhelia, and other such phenomena. For the upper air manifests, by the manner in which it is affected, the propagation of the wind before [it is perceived below].

Again, the blowing with greatest force at the end (which is a common feature of most winds) [is an indication to be observed]. For when they blow as it were in a mass, there is little left to come.

Such then are what have been called common and essential characteristics of the winds.

Each wind has its own peculiarities, corresponding to its particular nature and position; some of which are attributable to the places across which, and to which, their currents are directed; others to their originating causes: and others to other such reasons.

The most striking peculiarities in fact are those of the E.N.E. wind (Kaikias) and the W. wind (Zephyros). For the E.N.E. wind (Kaikias) alone attracts the clouds towards itself as the proverb says: —

“To himself he gathers alway, as doth Kaikias the clouds.”

— The W. wind (Zephyros) is the most gentle of all the winds; and it blows in the afternoon and towards the land, and is cold; and it blows in two seasons of the year only, namely Spring and late Autumn. There are places, however, where it blows with storm force; whence the Poet called it “ill-blowing.” But in some places it is moderate and soft; whence Philoxenus in his poems spoke of its “sweet breath.” Some fruits also it brings to maturity;

others it thoroughly spoils.

The reason [for the peculiarity just mentioned] in the case of the E.N.E. wind (Kaikias) is, that it is its nature to move in a curved line, of which the concave side is towards the sky, and not extended over the earth, as in the case of other winds; for this wind blows from below; and blowing in this way towards its commencement, it attracts the clouds towards itself. For towards whatever point the current is, thence also is the movement of the clouds.

The W. wind (Zephyros) is cold because it blows from the West, and from the sea and open plains; and still more so because it blows just after the winter, in spring, when the sun is only just acquiring power; and in late autumn, when the sun has no longer power. But it is less cold than the N. wind because it blows from water in the state of being converted into wind; and not from snow in the like state. And it is intermittent because the wind as it is produced is not under control. For it does not [wait] as winds do on the land [to gather substance], but wanders hither and thither because it has come upon a moist surface. And it is uniform and soft also for this reason; for it does not blow off hills, nor from snow rapidly thawed; but it blows easily like [water] flowing through a pipe. For the regions of the N. wind and the S. wind are mountainous; but to the West there is neither hill nor land, but the Atlantic Ocean; so that it is borne on to [and not from or over] the land. And it blows in the evening, by reason of its place of origin; for all winds are produced concurrently with the sun diffusing or sublimating moisture through, or into the air, or co-operating towards their initiation. Whenever therefore the sun arrives at that particular quarter, then also does the current from that quarter begin to flow; and this same W. wind — (Zephyros) ceases at night because the motive force of the sun then fails. And it brings the greatest clouds, because it blows from the ocean and along the sea, so that it collects them from a great space. And it is stormy and “ill-blowing” for the reasons already explained; for it blows after winter while the air is still cold. On the other hand the W. wind (Zephyros) of the late autumn is not of that character; unless we predicate storminess of a wind according to its force; for it does blow with force in some places quite near to others where it has not such force; just as other winds do. And perhaps its stormy character must be understood in this way; and not as being general; unless indeed it be that some writers interchange the names, and call what is really Thraskias (or the N.N.W. wind)

Zephyros (or the W. wind). But this must be further investigated.

Its evenness and softness, where these are present, cause a certain grateful sensation as it moves and passes by; so that when this is its character, it is pleasant.

But as to its destroying some fruits, and making others thrive; that is true of it as a general proposition; and the same thing can be said generally of other winds as well; for a wind makes fruit thrive in Summer when it blows cool, and destroys it when its blast is hot. And similarly again in Winter and Spring, when the wind is cold, it destroys; but when warm, it nurtures; and so in each case, it exerts a preserving power by having a condition of air opposed to that of the season. This happens when the wind is from the sea. For the sea is warm in Winter, and cold in Summer; and for this reason it is that the S. wind has this character in some places; as in Argos; and the N. wind likewise in other places.

What we have now said of this W. wind is its ordinary and common character. But the peculiarities which it exhibits in particular places must be examined; and examined from the point of view of the particular situation, and other circumstances of the place. For the difference will be found to arise almost entirely from local causes. For instance in Italy, Locris and the adjoining country prospers under the W. wind; because it strikes upon it from the sea. But there is another part which does not do so well; and some places are even blasted by it. And again, in Crete, Gortyna thrives under it. For it lies spread out, and the wind strikes upon it from the sea; but another district of that Island on which the wind strikes from off the land and off certain hills, is destroyed. And in the Maliac Gulf it destroys all the seedling crops and the tree fruit; and so too around the Pierian District of Thessaly. The natural configuration of both these places is the same, and the surroundings are similar; for both lie towards the East, and are surrounded by lofty hills; the one by CETA and the hills connected therewith; the other by Pierus. So the W. wind, blowing from the quarter where the sun sets at the equinox, deflects the warmth which strikes from the sun on the hills, and turns it down directly on to the plain, and burns it up. And it acts similarly in other places in which such or the like circumstances occur; and the contrary happens in converse cases. For this, which we repeat again and again, is true absolutely; that it makes a great difference, and especially in respect to heat and cold, through

what, and from what quarter, a wind blows. For instance, the reason why the S. wind is not less cold than the N. wind, as the saying is, is that the wind passing through air left as yet chilled and damp by the winter, must, when it strikes upon us, have the same character as the air itself. And the “N.-wind-after-mud” which makes a storm, as another proverb tells us, does so for the same reason; for the air when rendered moist is cold.

So also are breezes from rivers cold as has been already mentioned.

The peculiar features of these winds can thus be rationally explained.

But that winds blow in Winter and in the morning from the East, and in Summer and in the afternoon from the West is to be explained on the following ground. When the sun attracting the air can no longer control it, then the air is released and flows along; and so, as it sets, it leaves clouds behind, whence flow the W. winds; and whatever air it draws with it, becomes, to those whose live in the lower hemisphere, a morning wind; and conversely when it sets in the lower hemisphere, it causes W. winds there; but to those here, a morning wind from the air which follows on with it.

For this reason also, if the morning wind find another wind blowing; it becomes greater; for it adds to it.

And as the W. wind is always, and over a considerable area, blowing with those who dwell in the West, so do other corresponding winds blow with those on the other side of the world near our dawn, which is their sunset. These results in fact happen under similar conditions to the inhabitants of each hemisphere, and the wind-current, just as the rain and other phenomena at the extremities of each area, arises according to circumstances; not indeed by any absolute law, but as a general rule.

The S. wind is accustomed to blow at the rising of Sirius, just like any other periodic event. And the reason is that the lower part of the atmosphere is heated by the presence of the sun; so that much vapour is produced. And these periodic S. winds would blow considerably, if they were not prevented by the monsoon from so doing; but, as it is, the monsoon prevents them.

N. winds arising in the night blow themselves out at the third day; whence the proverb runs: —

“A North-wind rising in the night Never sees the third day’s light;” because the winds that begin from the North in the night are weak; for it is apparent that the amount set in motion when it blows at a time when the heat is but

small, cannot be much; for little moves little; and they all end in three days; and those that are of the least force end early on the third day.

That this same result does not happen also when the S. wind blows as a night wind, is to be accounted for by the fact that the sun is near the region that lies towards the South, and the nights are warmer there, than the days are towards the North; and the amount of air set in motion during the night is great; in fact not less so than in the daytime. While the hotter the days are, the more do they, by drying up the moisture, prevent the S. winds blowing.

And it may be that the reason in the case of the N. wind is that it bursts all of a sudden as squalls do; and sudden winds quickly cease:

“For from a weak beginning no great end can come.” The N. wind is also as a general rule violent; and so is the S. wind after snow and hoar frost, whence the proverb:

“After Frost hoar Southern winds roar;” because both [snow and hoar frost] fall when a sort of fermentation and purification has set in; and after fermentation and purification there is a change to a contrary condition of things: and the S. wind is contrary to the N. wind. With this agrees the fact that after rain and hail and such like falls, winds drop; for all these, and such as these, are a kind of fermentation and purification of the air.

But as cloudy weather, or clear weather, accompanies each wind, according to the country whence it blows and to local causes, so there are some proverbial sayings which relate to certain places only; as for instance that about the W.N.W. wind (Argestes) and the W.S.W. wind (Lips), which they use mostly about Crete and Rhodes; “Lips is the wind that makes quickly the clouds, and quickly the sunshine; “Cloud follows Argestes, all the way unto its end.” For in the places just mentioned the W.S.W. wind quickly produces either result, according to the state of things which exists when it begins to blow; and the W.N.W. wind quickly overcasts the sky.

In some places also there is a sort of sequence of the winds; so that one blows after the other, if the first continue a certain time. And perhaps it is not very strange that, granted the circulation of the winds is always towards those next to them in order, there should on the other hand be also a change over to those of the opposite direction. For there are these two kinds of a change; one when the winds shift round; the other when the winds [that are blowing at first] blow themselves completely out [and others arise]. Of these, the

variation by shift is when the E.S.E. wind (Euros) shifts to those next in order of place; and this variation is the less in degree; and when it happens, there is frequently a recurrence to the same point as before, when a storm causes an uncertainty of direction. The variation by changing over is when the wind flies round to the opposite quarter.

This naturally happens in the case of all winds; and in these cases the compensation and reflux, as it were, is such as we should expect; an instance of which exists in the “off-shore winds as the counterpart of the “alternating” winds; and this order of variation is, in many places, of practically daily occurrence.

But in some places the counterpart is not an “alternating” wind, but some second wind from the sea as happens in the Gulf of Pamphylia. There, in the morning, a wind called “Dyris” blows with much force, from the river Idyrus; and it is followed by the S. wind (Notos), and the E.S.E. wind (Euros), and when they beat against each other mighty waves arise; the sea is dashed together; many a flash of lightning falls; and the ships are wrecked. For in every case whenever such a conflict of winds happens, mighty waves arise, and there is a great storm; as when, with contrary winds blowing, they say “There is a battle of the winds.” In fact it is but likely that, whenever they attack each other before they have blown themselves out, it should cause a storm; for the one adds, as it were, substance to the other.

This is more particularly evident in the case of the N. wind; for this wind is of a more stormy nature, and immediately appropriates the substance that is brought in its way [by another wind]. And in the same way the S. wind is wont to saturate, and make rainy, any other wind that it conflicts with.

In some places also the S. wind seems to cause snow storms; as is the case in the neighbourhood of Pontus and the Hellespont, whenever the N. wind has been so cold that it continues freezing the moisture brought up by the S. wind; at least it more frequently freezes than thaws.

The foregoing are what may be called the winter successions and oppositions of the winds.

But the confusion of winds that happens at the rising and setting of Orion happens because, at times of change, everything is naturally liable to get into confusion. Now, Orion rises at the beginning of Autumn and sets at the beginning of winter; so that as there is no established season for the time

being, one in fact commencing and the other ending, the winds are of necessity uncertain and confused, because they stand on, as it were, debatable ground between the two seasons. And so it is that this constellation has acquired the reputation of being fierce, both when setting and when rising, by reason of the indefiniteness of the season; for it needs be that it should be disturbed and irregular.

Such, and such as these, then are the phenomena that occur in the air and throughout the Heavens; others are connected with our own conditions. For instance, with Southerly winds men find themselves more weary and incapable; and the reason is that, instead of a little, a great deal of moisture is produced, being melted out by the heat; and so instead of a light air, there is a heavy damp. Again power and strength reside in the joints; and these are relaxed by Southerly winds. For the lubricating matter in the joints when congealed prevents our moving ourselves; but when too fluid prevents our exerting ourselves. Northerly winds will produce a certain balance, so that we are stronger and can exert ourselves more.

Again, Southerly winds, when dry and not rainy, produce fevers; for being naturally warm and moist they induce in our bodies a warm moisture that is foreign to them; and such a condition is feverish; for fever is due to the excess of both these two conditions. But when these winds are accompanied by rain, the rain cools the system.

In the same way, whatever else affects the habits of our bodies depends on one or other of these conditions and such things are very numerous, and are observed in numerous persons; but the causes of all are the same, or very nearly so.

So, too, in the case of fruits, and other such like things; for all the effects which they exhibit are to be referred to either moisture and diffusion, or density and consolidation, and other conditions of one category or the other.

So, too, in the case of inanimate things; such as the breaking of lyre-strings, the cracking open of glued articles, and other occurrences which happen as things become moist and slack. For instance, in the manufacture of iron they say that they can beat it out further with a Southerly wind than with a Northerly; and the reason is that Northerly winds dry up and make hard, but Southerly winds moisten and soften; and everything is easier to work when it is softened, than when it has become somewhat hardened. At the same time,

however, [the smiths] are stronger and more active in Northerly winds.

As a general proposition the causes of such phenomena as these are quite evident, for the consequence follows rationally from the active principles. But there is sometimes, in the case of either wind, matter for doubt and enquiry; for instance, if neither hardness nor dryness nor recurrence is exhibited with northerly winds, but the opposite conditions appear; and similarly in the case of the S. wind. For that which is contrary to reason requires a cause to be shown for it; but men accept what is reasonable without a cause being shown for it; for they are clever at supplying what is wanting.

But that winds, when they are cold, dry up moisture more quickly even than the sun when it is hot, and that the coldest winds do so most of all, must be understood to be due to this cause, namely, that they produce vapour, and carry it off as they produce it; and the colder winds do so more than the less cold; while the sun produces it and leaves it when it is produced.

Why can it be that it is said: —

“Fear not as much a cloud from the land as from ocean in Winter; But in the Summer a cloud from a darkling coast is a warning”?

Can it be because in winter the sea is warmer than the land, so that if a cloud is formed over it, its formation is obviously due to a powerful active principle? For otherwise it would have been dissolved by the air by reason of the warmth of its situation; while in Summer the sea is cold and so are the winds from the sea; and the land is warm; so that if a cloud is borne from the land seawards its formation must be due to some active principle more powerful than usual; for the cloud would have been dissolved, if the active principles had been weak.

That the S. wind does not blow freshly in Egypt for the distance of a day and night’s journey from the coast, is utterly untrue. But it is said that the N. wind and W.N.W. wind most of all the winds there cover the sky with clouds, and the S. wind bears them away; that winds in the dawn bring clouds, and overcast the sky until the sun has risen; but that it does not rain, because the clouds have no place on which to settle; that the S. wind and the S.E. wind and the other winds from the Southern quarter begin to blow at sunrise, and follow round with the sun; but that the N. wind and the W.N.W. wind begin at sunset, and travel round towards the sun-rising.

In Sicily they call “Apeliotes” (the E. wind) what we call “Kaikias” (the

E.N.E. wind); some, however, think that it is not the same wind, but a different one; because the one overcasts the sky, and the other does not. Some indeed call “Argestes.”

“Olympias”; others “Skiron and the Silicians call it “Derkias; and some call Apeliotes” (the E. wind) “Hellespontias; the Phoenicians call it “Karba” and those in Pontus call it “Berekyntias.”

On Stones



Anonymous 1774 translation

I. OF Things formed in the Ground, some have their Origin from *Water*, others from *Earth*.

II. *Water* is the Basis of Metals; as Silver, Gold, and the rest: *Earth* of Stones; as well the more precious, as the common: and of the various *Earths* of peculiar Kinds, whether remarkable for Colour, Smoothness, Density, or whatever other Quality.

III. The *Metals* have been considered in another Work: the *Stones* and *Earths* of various Kinds, therefore, are to be the Subject of this Treatise.

IV. All these we are (plainly speaking) to judge formed by the Concretion of Matter pure and equal in its constituent Parts; which has been brought together in that State by mere *Afflux*; or by means of some Kind of *Percolation*; or separated, as before observed, from the impurer Matter it was once among, in some other Manner: For perhaps it is effected in some Cases by one; and in others by other of these Means.

V. From the Differences of the constituent Matter; and of the Manner of its Coalescence, the *Concrete* assumes its various *Qualities*, as *Smoothness*, Density, Brightness, *Transparency*, and the like; and according as it is more pure and equal, the more does it partake of these.

VI. On the whole, the more perfectly the *Concretion* has been formed, and the more *equal* in its constituent Parts the concreting Matter was, the more does the *Concrete* possess the peculiar Properties which are owing to that Equality.

VII. The Concretion is, in some of these Substances, owing to Heat; and in others to *Cold*. There is perhaps nothing to hinder but that the Coalescence of some Kinds of *Stones* may be occasioned by the one, and of others by the other of these Causes: though that of the *Earths* of all Kinds seems owing only to *Heat*. From these contrary Causes, however, may happen the Concretion, or dissipation of contrary Substances.

VIII. There are in *Stones* of different Kinds many peculiar Qualities, which

arise from this, that there are many very great Differences both in the Matter and Manner of the Affluxes of the terrestrial Particles from which they were formed; of which those in regard to Colour, Tenacity, Smoothness, Density, and the like Accidents, are frequent; though those in other more remarkable Properties, are not so common.

IX. These Qualities *Stones* have, therefore, from the common Differences of the Matter, and Manner of the Affluxes of their constituent Parts: But besides these, they have others which arise from the more peculiar Powers of their concentered Masses: Such are their acting upon other Bodies; or being subject, or not subject to be acted upon by them. Thus some are fusible, others will never liquify in the Fire; some may be calcined, others are incombustible; and in others, other such particular Properties are observable. To this it may be added, that in the Action of the Fire on them, they also shew many Differences.

X. Some are said to have a Power of making Water appear of their own Colour, as the *Emerald*. Others of petrifying, or converting wholly into Stone, whatever is put into Vessels made of them. Others have an attractive Quality; and others serve for the Trial of Metals, as that called the *Lydian* Stone.

XI. The greatest, however, and most wonderful of all the Qualities of *Stones* is that (if the Accounts of it are true) of those which bring forth young.

XII. But the most known and general Properties of *Stones* are their several Fitnesses for the various Kinds of Work. Some of them are proper for engraving on; others may be shaped by the Turner's Tools; others may be cut or sawed: Some also there are which no Iron Instruments will touch; and others which are very difficultly, or scarce at all to be cut by them XIII. There are also, besides there, many other Differences observable in them, according to their several Qualities; of which those in regard to Colour, Hardness, Softness, Smoothness, and the like Accidents, because of the Number and Diversity of those Qualities, happen to many.

XIV. And to some indeed through whole Countries; from which Quarries of them have obtained their Names; as the — *Parian*, the *Pentelican*, the *Chian*, and the *Theban*.

XV. In *Ægypt*, about, there is also found the *Alabaster*, which is dug in large Masses; and the *Chernites*, which resembles *Ivory*, and in which, it is

said, *Darius* was buried; as also the — *Porus*, which in Colour and Hardness emulates the *Parian* Marble, though singular in its remarkable Lightness: in this it resembles the *Tophus*: and on Account of this the *Ægyptians* generally used it in the Partitions of their more elegant Edifices.

XVI. There is also found in the same. Place a transparent, something like the *Chian*: and in others, there are many other Kinds.

XVII. These are the Differences which have been mentioned as common to many *Stones*. But those which arise from the particular Powers before named, are less frequent; nor do they like these, happen to whole Strata, or vast Masses. Some of the Stones, in which they take Place, are very scarce and small, as the — *Emerald*, the *Carnelian*, the *Carbuncle*, the and, in general, all that are cut as *Gems*: and some of them are found in dividing other Stones.

XVIII. Some few of these Stones there are, which are subject to the Force of *Fire*, and may be burnt. These shall be first treated of, in Consideration of what their Differences are.

XIX. In regard to the Action of Fire on them, some are fusible, and melt by it; as the metalline Kinds. For the *Stones*, which partake of the Nature of *Metals*, as *Silver*, or *Iron*,” melt in the Furnaces with them; either by means of the Humidity of the metalline Matter of which they partake; or of their own Nature: and in this Manner the *Pyritoe* also, and those Kinds of them called the *Molares*, melt with the Matter they are laid upon in burning.

XX. Some absolutely affirm, that all *Stones* will melt in the Fire except — which by burning is reduced to Lime: But this is saying absolutely, and of all, what ought only to be said in general, and of the greater Number.

XXI. For some burst and fly in Pieces in the Fire: as, though not fusible, yet not of Power wholly to refill the Force of the Heat; which is also the Case in earthen Vessels. This is an Effect no way repugnant to Reason; for these are absolutely dry, whereas whatever is fusible must be, at least in some Degree, moist; and retain, to the Time of its Fusion, more or less of its Humidity.

XXII. It is said also, that on exposing to the Sun's Rays some are wholly dried up; so as to be rendered useless, unless macerated and impregnated again with Moisture: while others by the lame means become softer and more brittle. It is evident that the Humidity is extracted in both these Cases; the Difference is, that the more dense and compact Stones harden by this drying; whereas the looser, and those of a less firm Texture, become more brittle and

soft by it.

XXIII. Some of the more brittle *Stones* there also are, which become as it were burning Coals, when put into a Fire, and continue so a long time: of this Kind are those about *Bena*, found in Mines, and washed down by the Torrents, for they will take fire on throwing burning Coals on them, and continue burning so long as any one blows them; afterwards they will deaden, and may after that be made to burn again: they are therefore of long Continuance, but their Smell is troublesome and disagreeable XXIV. That also which is called the *Spinus*, is found in Mines. This Stone cut in Pieces and thrown together in a Heap, exposed to the Sun, burns: and that the more, if it be moistened or sprinkled with Water.

XXV. But the *Lipara* Stone empties itself as it were in burning; and becomes like the *Pumice*: changing at once both its Colour and Density; for before burning it is black, smooth, and compact. This Stone is found in the *Pumices*, separately, in different Places, and as it were in Cells, no where continuous with the Matter of them. It is said, that in *Melos* the Pumice is produced in this Manner in some other Stone, as this is on the contrary in it. But the Stone in which the Pumice is found, is not at all like the Stone, which is found in it.

XXVI. Certain Stones there are about *Tétrás* in *Sicily*, which is over against *Lipara*, which empty themselves in the same Manner in the Fire.

XXVII. And in the Promontory called *Erineas*, there is a great Quantity of Stone like that found about *Bena*; which, when burnt, emits a bituminous Smell, and leaves a Matter resembling calcined Earth.

XXVIII. Those fossile Substances that are called Coals, and are broken Use, are earthy, they kindle however, and burn like wood Coals. These are found in *Liguria*, where there also is Amber, and in *Elis*, in the Way to *Olympias* over the Mountains. These are used by the Smiths XXIX. There is also found in the Mines of *Scaptesyloe* a Stone, in its external Appearance something resembling rotten Wood; on which, if Oil be poured, it burns; but when the Oil is burnt away, the burning of the Stone ceases, as if it were in itself not liable to such Accidents.

XXX. These then are the Differences of the Stones which are subject to the Force of Fire.

XXXI. But there is another Kind of Stone, formed, as it were, of contrary

Principles, and entirely incombustible:

This is called the Carbuncle, on which they engrave Seals. Its colour is red, and of such a Kind, that when held against the Sun, it resembles that of a burning Coal. This Stone is extremely valuable, one of a very small Size being valued at forty Aurei. It is brought from *Carthage* and XXXII. There is also an incombustible Stone found about Miletum, which is of an angular Shape, and sometimes regularly hexangular; they call this also a Carbuncle from its not being injured by the Fire; but that is strange, for the Diamond might as properly be for that Reason called by the same Name, as it also possesses that Quality.

XXXIII. The Power these Stones have of refilling the Force of Fire; is not from the same Cause with that of the Pumices, or of Ashes. They seem not to burn, because they absolutely and originally contain no Moisture; whereas those Substances do not kindle nor burn in the Fire, because their Humidity has been already evaporated.

XXXIV. Some are of opinion, that the Pumices have been entirely made what they are by burning; that Kind excepted which they esteem formed by the Concretion of the Froth of the Sea: This Opinion, as to the Sea kind, they take from the apparent Testimony of their Senses.

XXXV. As also the other, in regard to those formed in the Mouths, and different Openings of the burning Mountains, through which the Flames have made their way: and those made by burning the *Lapis Arabicus*, a Stone, which when it has passed the Fire as fumes the Form of the Pumice. The places, indeed, in which Pumices are produced, seem to testify the Manner of their Formation; for they are principally found about the Craters of the burning Mountains. On the whole some Kinds of them, perhaps, may be formed by the Action of Fire on Stones of a proper Texture, and others in some other Manner: for there are in Nature many different Ways of Production..

XXXVI. The Pumices in the Island of *Nisuros* seem an Instance of this, for they appear to have been formed by a flight Coalescence only of an arenaceous Matter: What is esteemed a Proof of this is, that some of the Pumices found there crumble in the handling into a kind of Sand, as if they never had been thoroughly concreted or bound into a Mass.

XXXVII. These are found in Heaps, many of them at least as big as can be

grasped in a Man's Hand, and sometimes larger than that, when the superficial Part is taken off.

XXXVIII. All the Pumices of the island of *Melos* are also light and sandy; and some Kinds there are which are produced, as was before observed, in other Stones.

XXXIX. The different Sorts also vary from one another in Colour, Compactness, and Gravity.

XL. As to their Colour, there is a black Kind found on the *Sicilian* Shores, which is compact and weighty, and something resembles that kind of the Pyrites called the *Molaris*: for there is a natural Pumice of this Texture, heavy and compact; and this is of more Value and more useful than many of the others; this Kind from the Shores is a better Abstergent than the light white Kind: But the moil abstergent of all others, is that from the Sea itself.

XLI. Hitherto has the Pumice been treated of: Hereafter are to be considered the Natures and Causes of the Diversity of the other several Kinds of combustible and incombustible Stones; from the History of which this Digression has been made.

XLII. There are, beside what has been already named, among the Stones which are cut as Gems, other Differences, in regard to their several peculiar Qualities.

XLIII. Some of which are in the external Appearance only. Of this Kind are those of the Carnelian, the Jasper, and the Sapphire; which last is spotted, as it were with Gold.

XLIV. The Emerald has also its peculiar Properties; for it assimilates Water, as was before observed, to its own Colour. A Stone of a middling Size will do this to a small Quantity only of the Water into which it is put, a large one to the Whole; but a bad one to no more than a little of it, which lies just about it. It is also good for the Eyes; for which Reason People carry about them Seals engraved on it, that they may have them to look on. It is, however, a scarce Stone; and but small: unless we are to give Credit to the Commentaries of the *Egyptian* Kings, in which it is recorded, that there was once sent as a Present from a King of *Babylon* an Emerald four Cubits in length, and three in breadth: And that there was in their Temple of an Obelisk composed of four Emeralds, which was forty Cubits long, and in some Places four, and in others two Cubits wide. These Accounts we have from their

Writings, XLV. But of those which are commonly called the Tani, the largest any where known is in *Tyrs*; for there is at that Place a very large Pillar of this Stone in the Temple of Hercules. But perhaps this is no true Emerald, but of the *Pseudo-Smaragdus*, or bastard Kind; for there is such a Stone of this Class.

XLVI. The common bastard Emeralds are produced in Places known and well frequented; especially in two; the Copper Mines of Cyprus, and an Island over against *Carthage*. In this Island the true Emerald is also sometimes found. These are dug out of the Earth as the other; and in *Cyprus* there are many Veins of them together; few, however, are found there big enough for Seals to be engraved on: the small ones are very numerous, insomuch that they use them for soldering of Gold; which Purpose they serve in the manner of Chrysocola. Some have imagined them, indeed, to be of the Chrysocola Kind, and in Colour they certainly are very like.

XLVII. The Chrysocola is found in great Quantity in Gold Mines; and even much more plentifully in those of Copper, and the Places near them.

XLVIII. The true Emerald is, as before observed, a scarce Stone; it seems to be produced from the Jasper, for it is said there has been found in *Cyprus* a Stone, the one half of which was Emerald and the other Jasper, as not yet changed.

XLIX. There is some Workmanship required to bring the Emerald to its Lustre, for originally it is not so bright.

L. It is, however, excellent in its Virtues, as is also the *Lapis Lyncurius*, which is likewise used for engraving Seals on, and is of a very solid Texture, as Stones are; it has also an attractive Power, like that of Amber, and is said to attract not only Straws and small pieces of Sticks, but even Copper and Iron, if they are beaten into thin Pieces. This *Diodes* affirms.

LI. The *Lapis Lyncurius* is pellucid, and of a fire Colour: And those Stones which are produced from the Animal in its native Wildness, are better than those from the tame; as also those from the Male, than those from the Female: As the different nourishment the Creature eats, and the different Exercise it uses, as well as the Difference of its whole Habit of Body, in being either dryer or moister, make great Differences in the Stones.

LII. They are found in digging, by People who are skilful; though the Creature, when it has voided its Urine, hides it, and heaps the Earth together

about it. The polishing these Stones is also a Work of great Trouble.

LIII. Amber also is a Stone: It is dug out of the Earth in *Liguria*, and has, as the before mentioned, a Power or Attraction: But the greatest and most evident attractive Quality is in that Stone which attracts Iron. But that is a scarce stone, and found in but few Places: It ought, however, to be ranked with these Stones, as it possesses a like Quality.

LIV. There are, beside these, many other Gems used for the engraving Seals: As the Hyaloides, which reflects the Images of Things, and is pellucid; the Carbuncle, and the Omphax; as also Crystal, and the Amethyst; both which are, in like manner, pellucid.

LV. These, as also the Carnelian, are sometimes found in the dividing other Stones.

LVI. Other Differences there also are, as was before observed, in Gems of the same Name: As in Camelians, that Species which is pellucid and of a brighter red, is called the Female; and that which is pellucid and of a deeper red, with some Tendency to Blackness, the Male. The *Lapis Lyncurius* is distinguished in like manner, the Female of which is more transparent, and of a paler yellow; and the *Lapis* — is in the same manner divided into Male and Female; the Male is in this also of the deeper Colour.

LVII. There is also the Onyx, variegated with white and brown placed alternately; and the Amethyst, which resembles Red-wine in Colour.

LVIII. The Agate also is an elegant Stone; it has its Name from the River *Achate* in *Sicily*; and is sold at a great Price.

LIX. There was also once found in the Gold Mines of *Lampsacus* an admirably beautiful Gem, on which, after it had been lent to *Uyre*, a Seal was engraved, which for its Excellence was presented to the King.

LX. These are very beautiful, and very scarce: But those produced in *Greece*, are of the meanest and worst Kind.

LXI. Such are also the Carbuncles of *Orchotnenus* in *Arcadia*, which are darker coloured than the *Chian*; but are, however, used for making Mirrors; and the *Trazenian*, which are varied gated with purple and white: The *Corinthian* is also of this Kind; it is variegated with the same Colours, but is whiter and paler. And finally, there are many others of this Sort.

LXII. But the most perfect and valuable Carbuncles are scarce, and had only from a few Places as *Carthage* and *Massilia* from *Ægypt*, about the

Cataracts of the Neighbourhood of *Syene*, a City of the *Elephantines*, and from the Country called *Psebos*.

LXIII. In *Cyprus* also are found the Emerald and the Jasper but what are used for letting in Cups and other Vessels of Gold, they have from *Bactriana*, toward the Desert: They go thither on Horseback to search for them, at the Time of the blowing of the Etesian or annual Easterly Winds; for they are seen at that Time, as the Sands are violently tossed about by the Winds: What they find there, however, are but small.

LXIV. Of the Number of the Precious Stones is that also which is called the Pearl. It is not of a pellucid Nature, but Bracelets, and other Ornaments of great Value are made of it. It is produced in a kind of Oyster, and, in like manner, in the *Pinna marina*; and is found in the *Indies*, and on the Shores of certain Islands in the *Red Sea*.

LXV. These are of peculiar Excellence and Value. And there are yet also some others to be mentioned; as the fossile Ivory, which is variegated with Digitized by white and a dark Colour and the Sapphire, which is of a dark Dye, and not very different from the Male Cyanus; as also the Prasius, which is of an æruginous Colour.

LXVI. And the Hæmatites, or Bloodstone, which is of a dense, solid Texture, dry, or, according to its Nam seeming as if form'd of concreted Blood: There is also another Kind of it, called *Xanthus*, which is not of the Colour of the former, but of a yellowish White, which Colour the *Dorians* call *Xanthus*.

LXVII. To these may be added Coral, for its Substance is like that of Stones: Its Colour is red, and its Shape cylindrical, in some fort resembling a Root. It grows in the Sea.

LXVIII. The” petrified *Calamus Inflicus* also, is not very different from this. But these are more properly the Subjects of a different let of Observations. LXIX. Beside these there are also many Kinds of metalline Stones, some of which contain both Gold and Silver, though the Silver alone is visible; and these are very remarkable, both for their Weight and Smell.

LXX. As also the native Blue, or *pis Armenus* which has in it Chrysocolla; and another Stone, in Colour resembling the Carbuncle, but much heavier.

LXXI. Upon the whole, there are many and very remarkable, different Kinds of fossile Substances dug in Pits; some of which consist of an

argillaceous Matter, as *Ochre*, and *Reddle*; others of a sandy, as *Chryfocolla* and the *Lapis Armenus*; and others as it were of Ashes, as *Sandarach*, *Orpiment* and others of that Kind.

LXXII. Many other Properties there also are in these Substances which are easily observed. As that some of the Stones before named are of so firm a Texture, that they are not subject to Injuries, and are not to be cut by Instruments of Iron, but only by other Stones.

LXXIII. On the whole, there is a great Difference in the Texture of the larger Stones; as may be learnt from the different Manners in which they may be worked; some may be cut, others engraved on, and shaped, as before observed, by the Turner's Instruments, as the Magnet Gem, a Stone of very elegant Appearance, and much admired by many This carries a fine Resemblance of Silver, though it is in Reality a Stone of an entirely different Kind.

LXXIV. Many also there are, which admit all Kinds of working; as in *Siphnus* there is a fossile Substance of this Kind, which is dug in Lumps, and roundish Masses, at about three Furlongs Distance from the Sea: This may at first be either engraved on, or: worked by the Turner into any Form, by reason of its Softness; but when it is afterwards burnt and wetted with Oil, it becomes black and solid. Vessels of different Kinds, for the Service of the Table, are made of this.

LXXV. All Substances of this Kind are to be worked on by Iron Instruments; but others there are, which, as before observed, will not be touched by them, but must be cut by other Stones; and others yet, which may be cut with Iron, but the Instruments must be dull and blunt: Which is much as if they were not cut by Iron.

LXXVI. Iron, however, being harder in its Texture than Stone, will cut such as are both harder and more solid than these.

LXXVII. There seems, however, yet an Absurdity in this, since the Whetstone has Power upon, and takes off a Part of the Iron Instruments which are sharpened on it, and the Instrument may be made to cut and work upon the Whetstone; but notwithstanding, will not cut those Gems which are work'd into Seals; tho' the Stone with which they are worked is composed of the same Kind of Matter with the Whetstone, or something not very unlike it. These Stones are from *Armenia*. LXXVIII. The Nature of the Stone which

tries Gold, is also very wonderful, as it seems to have the same Power with Fire; which is also a Test of that Metal. Some People have, for this Reason, questioned the Truth of this Power in the Stone; but their Doubts are ill founded, for this Trial is not of the same Nature, or made in the same Manner with the other. The Trial by Fire is by the Colour, and Quantity lost, by it; but that by the Stone, is made only by rubbing the Metal on it; the Stone seeming to have a Power of receiving separately the distinct Particles of different Metals.

LXXIX. It is said also, that there is a much better Kind of this Stone now found out, than that which was formerly used; insomuch, that it now serves not only for the Trial of the refined Gold, but also of Copper or Silver coloured with Gold; and shews how much of the adulterating Matter by Weight is mixed with Gold: This has Signs which it yields from the smallest Weight of the adulterating Matter, which is a Grain, from thence a Colybus, and thence a Quadrans or Semi-Obolus; by which it is easy to distinguish if, and in what Degree, that Metal is adulterated.

LXXX. All these Stones are found in the River *Tmolus*; their Texture is smooth, and like that of Pebbles; their Figure broad, not round; and their Bigness twice that of the common larger Sort of Pebbles. In their use in the Trial of Metals, there is a Difference in Power between their upper Surface, which has lain toward the Sun, and their under, which has been to the Earth, the upper performing its Office the more nicely; and this is consonant to Reason, as the upper Part is the dryer; for the Humidity of the other Surface hinders its receiving so well the Particles of the Metals: For the lame. Reason also it does not perform its Office so well in hot Weather as in colder, for in the hot it emits Kind of Humidity out of its Substance, which runs all over it: This hinders the metalline Particles from adhering perfectly, and makes Mistakes in the Trials. This Exsudation of a humid Matter is also common to many other Stones; among others, to those of which Statues ate made; and this has been looked on as peculiar to the Statue.

LXXXI. These then, in general, are the Differences, and particular Qualities of Stones.

LXXXII. Those of Earths are fewer, indeed, but they are also more peculiar.

LXXXIII. 'Earth is subject to be liquated, altered from its original State

and Consistence, and afterwards indurated again. It will melt, as Stones, with fusible and fossile Substances; and is softened, and made into Bricks: These are of various Kinds, and composed in various Manners, but are all made by moistening and burning.

LXXXIV. But if Glass be made, as some affirm, of the, a vitrifiable Sand, it owes its Production to the extreme Force of Fire: The best is that, in the making of which Flints have also been used; for besides that they melt and mix with the running Mass, they have a peculiar Excellence in the making the Glass, insomuch that they give the Differences in the Clearness of the Colour; LXXXV. There is in *Cilicia* a kind of Earth, which by boiling becomes tough and viscous; with which they cover the Vines instead of Birdlime, to preserve them from the Worms.

LXXXVI. It may also be proper to mention here the Earths which are naturally endued with a Quality of petrifying Substances immersed in them; since those which yield peculiar and different Juices, have unquestionably some fixed and peculiar Properties, and are distinct Kinds; as are also those which supply Nourishment to Plants.

LXXXVII, Nor ought those to be less considered which are singular and remarkable in their Colours, and for that Reason used by Painters.

LXXXVIII. The Production of these, as was observed in the Beginning of this Treatise, is from the mere Afflux or Percolation of their constituent Particles.

LXXXIX. Some of these seem burnt, and to have suffered Changes by means of Fire, as Sandarach, Orpiment, and others of that Kind; all of them, however, plainly speaking, owe their present Form to the Exhalation of their more humid Parts; and these, in particular seem to have been dried, and, as it were, smoaked. They are found in Mines of Gold and Silver, and some in those of Copper also.

XC. Of this kind are Orpiment, Sandarach, Chrysocola, Reddle, Ochre, and the *Lapis Armenus*; but this last is scarce, and found only in small Quantities; whereas there are sometimes whole Veins of the others. Ochre is laid to be found generally heaped together; and Reddle scattered, as it were, every way. Painters use this Reddle in their Pictures, as also Ochre, instead of Orpiment; for when powdered they scarce at all differ in Colour, however different they appear in the Mass.

XCI. There are also in some Places peculiar Pits of Reddle and Ochre, as in — *Cappadocia*, from whence they are taken in vast Quantities: But in these Pits, it is said, the Labourers are in Danger of Suffocation; which unhappy Accident sometimes comes on very suddenly.

XCII. The best Reddle, for there are many Kinds, is thought to be that of *Cea*, and particularly that which is taken from the Reddle Pits; or it is also sometimes found in Iron Mines.

XCIII. There are beside these also, the *Lemnian* Reddle, and the — as it is commonly called; but it is dug in — *Cappadocia*, and thence carried to *Sinope*. There are particular Pits in *Lemnos*, in which nothing but the Earth is dug.

XCIV. There are three kinds of the *Sinopic*; of a deep Red, another of a whitish Colour, and the other of a middle Colour between the other two, which is called the pure simple Kind, because it is used without mixing, whereas they mix the others.

XCV. There is also a kind of this made of Ochre, by burning, but it is not nearly so good as the others. The making this was an Invention of who took the Hint of it, as is laid, from observing, in a House which was on fire, that some Ochre which was there, when half burnt, assumed a red Colour.

XCVI. The way of making the factitious is this: They put the Ochre into new earthen Vessels, which they cover with Clay and set in Furnaces; and these, as they grow hot, heat also the Ochre, and the greater Degree of Fire they give, the deeper and more strongly purple the Matter becomes. The Origin of the native Kinds seems to testify that this Method is not irrational, for all these seem to have suffered Changes by the Action of Fire:

From whence we may rationally conclude, that this way of making the factitious, is either of the same kind, or at least very analogous to that used by Nature for the Production of the genuine.

XCVII. The Reddle also is of two Kinds, the native, and the factitious
XCVIII. There is also, beside the native *Lapis Armenus*, a factitious Kind made in *Egypt*, There are, indeed, three different Sorts of this; the *Egyptian*, the *Scythian*, and the *Cyprian*; of which the *Egyptian* is the best for clear strong Paintings, and the *Scythian* for the fainter. The *Egyptian* is factitious; and the Historians, who write the Annals of the Kings of that Nation, think it a thing worthy a Place in their Histories, which King of *Egypt* was the Inventor

of the artificial *leum* in Imitation of the native.

XCIX. Presents are also made to great Perlons, in some Places, of this Substance, as well that which has passed the Fire as that which has not; and the *Phoenicians* pay their Tribute in it.

C. People who prepare Colours say also, that the *Lapis Armenus* of itself makes four different ones; the two extremes of which are, first, that which consists only of its finest Particles, and is very pale; and the other, that which consists of its largest, and is extremely deep.

CI. But these are the Works of Art, as is also Cerufe, to make which, Lead is placed in earthen Vessels over sharp Vinegar, and after it has acquired some Thickness of a kind of Run, which it commonly sees in about ten Days, they open the Vessels, and scrape it off, as it were, in a kind of Foulnefs; they then place the Lead over the Vinegar again, repeating over and over the same Method of scraping it, till it is wholly dissolved; what has been scraped off they then beat to Powder, and boil for a long Time; and what at last subsides to the Bottom of the Vessel is the Ceruse.

CII. In a Manner also, something resembling this, is Verdigrise made; for Copper is placed over the Lees of Wine, and the Rust which it acquires by this means is taken off for Use: And it is by this means that the Rust which appears is produced CIII. There are also two kinds of Cinnabar, the one native, the other factitious; the native, which is found in *Spain*, is hard and stony; as is also that brought from *Colchis*, which they say is produced there in Rocks and on Precipices, from which they get it down with Darts and Arrows. The factitious is from the Country a little above *Ephesus*; it is but in small Quantities, and is had only from one Place. It is only a Sand, shining like Scarlet, which they collect; and rub to a very fine Powder, in Vessels of Stone only; and afterwards wash in other Vessels of Brass, or sometimes of Wood: What subsides they go to work on again, rubbing it and washing it as before. And in this Work there is much Art to be used; for from an equal Quantity of the Sand some will make a large Quantity of the Powder, and others very little, or none at all. The Washing they use is very light and superficial, and they wet it every time separately and carefully. That which at last subsides is the Cinnabar, and that which swims above in much larger Quantity is only the superfluous Matter of the Washing.

CIV. It is said, that one *Callias*, an *Athenian*, who belonged to the Silver

Mines, invented and taught; the making this artificial Cinnabar. He had carefully got together a great Quantity of this Sand, imagining, from its shining Appearance, that it contained Gold: But when he had found that it did not, and had had an Opportunity, in his Trials, of admiring the Beauty of its Colour, he invented and brought into use this Preparation of it. And this is no old Thing, the Invention being only of about ninety Years Date; *lus* being at this Time in the Government of *Athens*.

CV. From these Accounts it is manifest, that Art imitates Nature, and sometimes produces very peculiar Things; some of which are for Use, others for Amusement only, as those employed in the ornamenting Edifices; and others, both for Amusement and Use. Such is the Production of Quicksilver, which has its Uses: This is obtained from native Cinnabar, rubbed with Vinegar in a brais Mortar with a brass Pestle. And many other Things of this kind others, perhaps, may hit upon.

CVI. There yet remain also of the fossile Kingdom certain remarkable, Earths dug out of Pits, the Formation of which, as was observed in the beginning of this Treatise (owing either to the mere Afflux or Percolation of their constituent Parts) is from a more pure and equal Matter than the other more common Kinds. And these receive their various Colours from the Differences as well of their Properties of acting on other Bodies, as of their being subject to be acted on by them. Some of these they soften, and others melt, and afterwards reduce to Powder; and from these compose the stony Masses which we receive from *Asia*.

CVII. But the native, which have their Use as well as Excellence, are only three or four; the *Melian*, the Digitized by

Cimolian, the *Samian*, and the *tymphaican*, çalled *Gyphum*.

CVIII. Of these the Painters use only the *Melian*; they meddle not with the *Samian*, though it is very beautiful, because it is fat, dense, and uncuous; whereas such as are of a looser Texture, crumbling, dry, and without Fatness, are fitter for their Use; all which Properties the *Melian* particularly that of *Pharis*, possesses. There are, however, beside these, in *Melos* and *Samos* both, many various kinds of Earths.

CIX. The Diggers in the Pits of *Samos* cannot stand upright at their Work, but are forced to lie along, either on their Backs or on one Side; for the Vein of the Earth they, dig runs lengthway, and is only of the Depth of about two

Foot, though much more in Breadth, and is inclosed in on every Side with Stones, from between which it is taken. There is also in the Mass of the Vein a distinct Stratum near the Middle, which is of better Earth than that without it; and within that there is sometimes another yet finer; and even beyond that a fourth: The farthest of these is that which is called the *After*, CX. Earths of some kinds are also used about Cloaths, particularly the *molian*. The *Tymphaica* is also used for the same Purposes; and the People of *Tymphaa* and the neighbouring Places call it *Gypfum*.

CXI. *Gypsum* is produced in great Quantities in the Island of *Cyprus*, where it lies open, and easy to be discovered, and come at, the Workmen having but very little Earth to take away before they get it. In *Phoenicia* and *Syria* also they have a Gypsum, which they make by burning certain Stones. They have a Gypsum in *Thuria* too, in great Plenty; as also about *Tymphoea*, and in the Country of the *Perrhæbeans*, and many other Places; but these are of a peculiar Kind, and are rather of a stony, than of an earthy Texture.

CXII. The Stone from which Gypsum is made, by burning, is like Alabaster; it is not dug, however, in such large Masses, but in separate Lumps. Its Viscidity and Heat, when moistened, are very wonderful.

CXIII. They use this in Buildings, casing them with it, or putting it on any particular Place they would strengthen. They prepare it for Use, by reducing it to Powder, and then pouring Water on it, and stirring and mixing the Matter well together with wooden Instruments: For they cannot do this with the Hand because of the Heat. They prepare it in this Manner immediately before the Time of using it; for in a very little While after moistening, it dries and becomes hard, and not in a Condition to be used.

CXIV. This Cement is very strong, and often remains good, even after the Walls it is laid on crack and decay, and the Sand of the Stone they are built with moulders away; for it is often seen, that even after some Part of a Wall has separated itself from the rest, and is fallen down, other Parts of it shall yet hang together, and continue firm and in their Place, by means of the Strength of this Matter which they are covered with.

CXV. This *Gypsum* may also be taken off from Buildings, and by burning, again and again, be made fit for Use. It is used for the casing the Outsides of Edifices, principally in *Cyprus* and *Phœnicia*, but in *Italy*, for a whitening

over the Walls, and other Kind of Ornaments within Houses. Some Kinds of it are also used by Painters in their Business; and by the Fullers, about Cloaths.

CXVI. It is also excellent, and superior to all other Things, for making Images; for which it is greatly used, and especially in *Greece*, because of its Pliableness and Smoothness.

CXVII. These Qualities of the *Gypsum*, therefore, fit it for these and such other Uses; for it seems naturally to have, as it were together, the Heat, and Tenacity of Lime, and the more viscous Earths. But it possesses both these Qualities in a much superior Degree to either of the others, which have them singly; for it acquires, on being moistened, a Heat much greater than that of Lime, and is much more tenacious than the most viscous of the Earths.

CXVIII. That its fiery Power is *very* great, is evident from this remarkable Instance: That a certain Ship which was laden with Cloaths, by some Accident letting in Water; the Cloaths being wetted by that Means, the *Gypsum* that was put among them took fire, and burnt both the Cloaths and the Ship.

CXIX. In *Syria* and *Phoenicia* they prepares *Gypsum* by Fire; putting into proper Furnaces Stones, principally of the Marble, and other Kinds, which are of the most simple Texture, and heating them to a certain Degree; the harder Kinds they lay upon those which burn more readily; and when burnt, the Matter appears to be of extreme Strength, and fitted for enduring a long Time: After this they beat the Stones to Powder like Lime, to make them fit for Use.

CXX. From all this it seems evident, that the Properties and Nature of this Matter, are in a great Degree owing to the Fire.

FINIS.

The Greek Texts



The Acropolis at Athens — after receiving instruction in philosophy in Lesbos from Alcippus, Theophrastus moved to Athens, where he may have studied under Plato.

List of Greek Texts



In this section of the eBook, readers can view the original Greek texts of Theophrastus' works. You may wish to Bookmark this page for future reference.

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Enquiry into Plants

Liber I

ΘΕΟΦΡΑΣΤΟΥ ΠΕΡΙ ΦΥΤΩΝ ΙΣΤΟΡΙΑΣ Α

[1] Τῶν φυτῶν τὰς διαφορὰς καὶ τὴν ἄλλην φύσιν ληπτέον κατὰ τε τὰ μέρη καὶ τὰ πάθη καὶ τὰς γενέσεις καὶ τοὺς βίους· ἦθη γὰρ καὶ πράξεις οὐκ ἔχουσιν ὥσπερ τὰ ζῶα. εἰσὶ δ' αἱ μὲν κατὰ τὴν γένεσιν καὶ τὰ πάθη καὶ τοὺς βίους εὐθεωρητότεραι καὶ ῥᾶους, αἱ δὲ κατὰ τὰ μέρη πλείους ἔχουσι ποικιλίας. αὐτὸ γὰρ τοῦτο πρῶτον οὐχ ἱκανῶς ἀφώρισται τὰ ποῖα δεῖ μέρη καὶ μὴ μέρη καλεῖν, ἀλλ' ἔχει τινὰ ἀπορίαν.

[2] Τὸ μὲν οὖν μέρος ἅτε ἐκ τῆς ἰδίας φύσεως ὃν αἰεὶ δοκεῖ διαμένειν ἢ ἀπλῶς ἢ ὅταν γένηται, καθάπερ ἐν τοῖς ζώοις τὰ ὕστερον γενησόμενα, πλὴν εἴ τι διὰ νόσον ἢ γῆρας ἢ πῆρῳσιν ἀποβάλλεται. τῶν δ' ἐν τοῖς φυτοῖς ἓνια τοιαῦτ' ἐστὶν ὥστ' ἐπέτειον ἔχειν τὴν οὐσίαν, οἷον ἄνθος βρύον φύλλον καρπός, ἀπλῶς ὅσα πρὸ τῶν καρπῶν ἢ ἅμα γίνεται τοῖς καρποῖς· ἔτι δὲ αὐτὸς ὁ βλαστός· αἰεὶ γὰρ ἐπίφυσιν λαμβάνει τὰ δένδρα κατ' ἐνιαυτὸν ὁμοίως ἐν τε τοῖς ἄνω καὶ ἐν τοῖς περὶ τὰς ρίζας· ὥστε, εἰ μὲν τις ταῦτα θήσῃ μέρη, τό τε πλῆθος ἀόριστον ἔσται καὶ οὐδέποτε τὸ αὐτὸ τῶν μορίων· εἰ δ' αὖ μὴ μέρη, συμβήσεται, δι' ὧν τέλεια γίνεται καὶ φαίνεται, ταῦτα μὴ εἶναι μέρη· βλαστάνοντα γὰρ καὶ θάλλοντα καὶ καρπὸν ἔχοντα πάντα καλλίῳ καὶ τελειότερα καὶ δοκεῖ καὶ ἔστιν. αἱ μὲν οὖν ἀπορία σχεδὸν εἰσιν αὗται.

[3] Τάχα δὲ οὐχ ὁμοίως ἅπαντα ζητητέον οὔτε ἐν τοῖς ἄλλοις οὔθ' ὅσα πρὸς τὴν γένεσιν, αὐτά τε τὰ γεννώμενα μέρη θετέον οἷον τοὺς καρπούς. οὐδὲ γὰρ τὰ ἔμβρυα τῶν ζώων. εἰ δὲ ἐν τῇ ὥρᾳ ὅψει τοῦτό γε κάλλιστον, οὐδὲν σημεῖον, ἐπεὶ καὶ τῶν ζώων εὐθενεῖ τὰ κύοντα.

Πολλὰ δὲ καὶ τὰ μέρη κατ' ἐνιαυτὸν ἀποβάλλει, καθάπερ οἱ τε ἔλαφοι τὰ κέρατα καὶ τὰ φωλεύοντα τὰ πτερὰ καὶ τρίχας τετράποδα· ὥστ' οὐδὲν ἄτοπον ἄλλως τε καὶ ὅμοιον ὃν τῷ φυλλοβολεῖν τὸ πάθος.

Ἦσαύτως δ' οὐδὲ τὰ πρὸς τὴν γένεσιν· ἐπεὶ καὶ ἐν τοῖς ζώοις τὰ μὲν συνεκτίκτεται τὰ δ' ἀποκαθαίρεται καθάπερ ἀλλότρια τῆς φύσεως. εἰσὶ δὲ παραπλησίως καὶ τὰ περὶ τὴν βλάστησιν ἔχειν. ἡ γὰρ τοι βλάστησις γενέσεως χάριν ἐστὶ τῆς τελείας.

[4] Ὅλως δὲ καθάπερ εἶπομεν οὐδὲ πάντα ὁμοίως καὶ ἐπὶ τῶν ζώων ληπτέον. δι' ὃ καὶ ὁ ἀριθμὸς ἀόριστος· πανταχῇ γὰρ βλαστητικὸν ἅτε καὶ πανταχῇ ζῶν. ὥστε ταῦτα μὲν οὕτως ὑποληπτέον οὐ μόνον εἰς τὰ νῦν ἀλλὰ καὶ τῶν μελλόντων χάριν· ὅσα γὰρ μὴ οἷόν τε ἀφομοιοῦν περιέργον τὸ

γλίχεσθαι πάντως, ἵνα μὴ καὶ τὴν οἰκείαν ἀποβάλλωμεν θεωρίαν. ἡ δὲ ἱστορία τῶν φυτῶν ἐστὶν ὡς ἀπλῶς εἰπεῖν ἢ κατὰ τὰ ἔξω μέρη καὶ τὴν ὅλην μορφήν ἢ κατὰ τὰ ἐντός, ὥσπερ ἐπὶ τῶν ζώων τὰ ἐκ τῶν ἀνατομῶν.

[5] Ληπτέον δ' ἐν αὐτοῖς ποῖα τε πᾶσιν ὑπάρχει ταῦτα καὶ ποῖα ἴδια καθ' ἕκαστον γένος, ἔτι δὲ τῶν αὐτῶν ποῖα ὅμοια· λέγω δ' οἷον φύλλον ρίζα φλοιός. οὐ δεῖ δὲ οὐδὲ τοῦτο λανθάνειν εἴ τι κατ' ἀναλογίαν θεωρητέον, ὥσπερ ἐπὶ τῶν ζώων, τὴν ἀναφορὰν ποιουμένους δηλὸν ὅτι πρὸς τὰ ἐμφερέστατα καὶ τελειότατα. καὶ ἀπλῶς δὲ ὅσα τῶν ἐν φυτοῖς ἀφομοιωτέον τῷ ἐν τοῖς ζώοις, ὡς ἂν τίς τῷ γ' ἀνάλογον ἀφομοιοῖ. ταῦτα μὲν οὖν διωρίσθω τὸν τρόπον τοῦτον.

[6] Αἱ δὲ τῶν μερῶν διαφοραὶ σχεδὸν ὡς τύπῳ λαβεῖν εἰσιν ἐν τρισίν, ἢ τῷ τὰ μὲν ἔχειν τὰ δὲ μὴ, καθάπερ φύλλα καὶ καρπὸν, ἢ τῷ μὴ ὅμοια μηδὲ ἴσα, ἢ τρίτον τῷ μὴ ὁμοίως. τούτων δὲ ἡ μὲν ἀνομοιότης ὀρίζεται σχήματι χρώματι πυκνότητι μανότητι τραχύτητι λειότητι καὶ τοῖς ἄλλοις πάθεσιν, ἔτι δὲ ὅσαι διαφοραὶ τῶν χυλῶν. ἡ δὲ ἀνισότης ὑπεροχῇ καὶ ἐλλείψει κατὰ πλῆθος ἢ μέγεθος. ὡς δ' εἰπεῖν τύπῳ κακεῖνα πάντα καθ' ὑπεροχὴν καὶ ἑλλειψιν· τὸ [7] γὰρ μᾶλλον καὶ ἥττον ὑπεροχὴ καὶ ἑλλειψις· τὸ δὲ μὴ ὁμοίως τῇ θέσει διαφέρει· λέγω δ' οἷον τὸ τοὺς καρποὺς τὰ μὲν ἐπάνω τὰ δ' ὑποκάτω τῶν φύλλων ἔχειν καὶ αὐτοῦ τοῦ δένδρου τὰ μὲν ἐξ ἄκρου τὰ δὲ ἐκ τῶν πλαγίων, ἓνια δὲ καὶ ἐκ τοῦ στελέχους, οἷον ἡ Αἰγυπτία συκάμινος, καὶ ὅσα δὴ καὶ ὑπὸ γῆς φέρει καρπὸν, οἷον ἡ τε ἀραχίδνα καὶ τὸ ἐν Αἰγύπτῳ καλούμενον οὐῖγγον, καὶ εἰ τὰ μὲν ἔχει μίσχον τὰ δὲ μὴ. καὶ ἐπὶ τῶν ἀνθέων ὁμοίως· τὰ μὲν γὰρ περὶ αὐτὸν τὸν καρπὸν τὰ δὲ ἄλλως. ὅλως δὲ τὸ τῆς θέσεως ἐν τούτοις καὶ τοῖς φύλλοις καὶ ἐν τοῖς βλαστοῖς ληπτέον.

[8] Διαφέρει δὲ ἓνια καὶ τῇ τάξει· τὰ μὲν ὡς ἔτυχε, τῆς δ' ἐλάτης οἱ κλώνες κατ' ἀλλήλους ἐκατέρωθεν· τῶν δὲ καὶ οἱ ὄζοι δι' ἴσου τε καὶ κατ' ἀριθμὸν ἴσοι, καθάπερ τῶν τριόζων.

Ὅστε τὰς μὲν διαφορὰς ἐκ τούτων ληπτέον ἐξ ὧν καὶ ἡ ὅλη μορφή συνδηλοῦται καθ' ἕκαστον.

[9] Αὐτὰ δὲ τὰ μέρη διαριθμησαμένους πειρατέον περὶ ἐκάστου λέγειν. ἔστι δὲ πρῶτα μὲν καὶ μέγιστα καὶ κοινὰ τῶν πλείστων τάδε, ρίζα καυλὸς ἀκρεμῶν κλάδος, εἰς ᾧ διέλοιτ' ἂν τις ὥσπερ εἰς μέλη, καθάπερ ἐπὶ τῶν ζώων. ἕκαστόν τε γὰρ ἀνόμοιον καὶ ἐξ ἀπάντων τούτων τὰ ὅλα.

Ἔστι δὲ ρίζα μὲν δι' οὗ τὴν τροφήν ἐπάγεται, καυλὸς δὲ εἰς ὃ φέρεται. καυλὸν δὲ λέγω τὸ ὑπὲρ γῆς πεφυκὸς ἐφ' ἐν· τοῦτο γὰρ κοινότατον ὁμοίως

ἐπετείοις καὶ χρονίοις, ὃ ἐπὶ τῶν δένδρων καλεῖται στέλεχος· ἀκρεμόνας δὲ τοὺς ἀπὸ τούτου σχιζομένους, οὓς ἔνιοι καλοῦσιν ὄζους. κλάδον δὲ τὸ βλάστημα τὸ ἐκ τούτων ἐφ' ἓν, οἷον μάλιστα τὸ ἐπέτειον.

Καὶ ταῦτα μὲν οἰκειότερα τῶν δένδρων.

[10] ὁ δὲ καυλός, ὥσπερ εἴρηται, κοινότερος· ἔχει δὲ οὐ πάντα οὐδὲ τοῦτον, οἷον ἔνια τῶν ποιωδῶν. τὰ δ' ἔχει μὲν οὐκ ἀεὶ δὲ ἀλλ' ἐπέτειον, καὶ ὅσα χρονιώτερα ταῖς ρίζαις. ὅλως δὲ πολύχουν τὸ φυτὸν καὶ ποικίλον καὶ χαλεπὸν εἰπεῖν καθόλου· σημεῖον δὲ τὸ μηδὲν εἶναι κοινὸν λαβεῖν ὃ πᾶσιν ὑπάρχει, καθάπερ τοῖς ζώοις [11] στόμα καὶ κοιλία. τὰ δὲ ἀναλογίᾳ ταῦτά τὰ δ' ἄλλον τρόπον. οὔτε γὰρ ρίζαν πάντ' ἔχει οὔτε καυλὸν οὔτε ἀκρεμόνα οὔτε κλάδον οὔτε φύλλον οὔτε ἄνθος οὔτε καρπὸν οὔτ' αὖ φλοιὸν ἢ μήτραν ἢ ἵνας ἢ φλέβας, οἷον μύκης ὕδνον· ἐν τούτοις δὲ ἡ οὐσία καὶ ἐν τοῖς τοιούτοις· ἀλλὰ μάλιστα ταῦτα ὑπάρχει, καθάπερ εἴρηται, τοῖς δένδροις κἀκείνων οἰκειότερος ὁ μερισμός. πρὸς ᾧ καὶ τὴν ἀναφορὰν τῶν ἄλλων ποιεῖσθαι δίκαιον.

[12] Σχεδὸν δὲ καὶ τὰς ἄλλας μορφὰς ἐκάστων ταῦτα διασημαίνει. διαφέρουσι γὰρ πλήθει τῶ τούτων καὶ ὀλιγότητι καὶ πυκνότητι καὶ μανότητι καὶ τῶ ἐφ' ἓν ἢ εἰς πλείω σχίζεσθαι καὶ τοῖς ἄλλοις τοῖς ὁμοίοις. ἔστι δὲ ἕκαστον τῶν εἰρημένων οὐχ ὁμοιομερές· λέγω δὲ οὐχ ὁμοιομερές ὅτι ἐκ τῶν αὐτῶν μὲν ὅτιοῦν μέρος σύγκειται τῆς ρίζης καὶ τοῦ στελέχους, ἀλλ' οὐ λέγεται στέλεχος τὸ ληφθὲν ἀλλὰ μόριον, ὥς ἐν τοῖς τῶν ζώων μέλεσιν ἔστιν. ἐκ τῶν αὐτῶν μὲν γὰρ ὅτιοῦν τῆς κνήμης ἢ τοῦ ἀγκῶνος, οὐχ ὁμώνυμον δὲ καθάπερ σὰρξ καὶ ὀστοῦν, ἀλλ' ἁνώνυμον· οὐδὲ δὴ τῶν ἄλλων οὐδενὸς ὅσα μονοειδῆ τῶν ὀργανικῶν· ἀπάντων γὰρ τῶν τοιούτων ἁνώνυμα τὰ μέρη. τῶν δὲ πολυειδῶν ὠνομασμένα καθάπερ ποδὸς χειρὸς κεφαλῆς, οἷον δάκτυλος ρίς ὀφθαλμός. καὶ τὰ μὲν μέγιστα μέρη σχεδὸν ταῦτά ἐστιν.

[2.1] Ἄλλα δὲ ἐξ ὧν ταῦτα φλοιὸς ξύλον μήτρα, ὅσα ἔχει μήτραν. πάντα δ' ὁμοιομερῆ. καὶ τὰ τούτων δὲ ἔτι πρότερα καὶ ἐξ ὧν ταῦτα, ὕγρὸν ἰς φλέψ σάρξ· ἀρχαὶ γὰρ αὗται· πλὴν εἴ τις λέγοι τὰς τῶν στοιχείων δυνάμεις, αὗται δὲ κοιναὶ πάντων. ἡ μὲν οὖν οὐσία καὶ ἡ ὅλη φύσις ἐν τούτοις.

Ἄλλα δ' ἐστὶν ὥσπερ ἐπέτεια μέρη τὰ πρὸς τὴν καρποτοκίαν, οἷον φύλλον ἄνθος μίσχος· τοῦτο δ' ἐστὶν ὃ συνήρτηται πρὸς τὸ φυτὸν τὸ φύλλον καὶ ὁ καρπός· ἔτι δὲ [ἔλιξ] βρύον, οἷς ὑπάρχει, καὶ ἐπὶ πᾶσι σπέρμα τὸ τοῦ καρποῦ· καρπὸς δ' ἐστὶ τὸ συγκεῖμενον σπέρμα μετὰ τοῦ περικαρπίου. παρὰ δὲ ταῦτα ἐνίων ἴδια ἄττα, καθάπερ ἡ κηκὶς δρυὸς καὶ ἡ ἔλιξ ἀμπέλου.

[2] Καὶ τοῖς μὲν δένδροισιν ἔστιν οὕτως διαλαβεῖν. τοῖς δ' ἐπετείοις δῆλον

ὥς ἅπαντα ἐπέτεια· μέχρι γὰρ τῶν καρπῶν ἢ φύσις. ὅσα δὴ ἐπετειόκαρπα καὶ ὅσα διετίζει, καθάπερ σέλινον καὶ ἄλλ' ἅττα, καὶ ὅσα δὲ πλείω χρόνον ἔχει, τούτοις ἅπασι καὶ ὁ καυλὸς ἀκολουθήσει κατὰ λόγον· ὅταν γὰρ σπερμοφορεῖν μέλλωσι, τότε ἐκκαυλοῦσιν, ὥς ἔνεκα τοῦ σπέρματος ὄντων τῶν καυλῶν.

Ταῦτα μὲν οὖν ταύτῃ διηρήσθω. τῶν δὲ ἄρτι εἰρημένων μερῶν πειρατέον ἕκαστον εἰπεῖν τί ἐστὶν ὡς ἐν τύπῳ λέγοντας.

[3] Τὸ μὲν οὖν ὑγρὸν φανερόν· ὃ δὴ καλοῦσί τινες ἀπλῶς ἐν ἅπασιν ὀπὸν, ὥσπερ καὶ Μενέστωρ, οἱ δ' ἐν μὲν τοῖς ἄλλοις ἀνωλύμως ἐν δὲ τισιν ὀπὸν καὶ ἐν ἄλλοις δάκρυον. ἱνες δὲ καὶ φλέβες καθ' αὐτὰ μὲν ἀνώνυμα τῇ δὲ ὁμοιότητι μεταλαμβάνουσι τῶν ἐν τοῖς ζώοις μορίων. ἔχει δὲ ἴσως καὶ ἄλλας διαφορὰς καὶ ταῦτα καὶ ὅλως τὸ τῶν φυτῶν γένος· πολύχουν γὰρ ὥσπερ εἰρήκαμεν. ἀλλ' ἐπεὶ διὰ τῶν γνωριμωτέρων μεταδιώκειν δεῖ τὰ ἀγνώριστα, γνωριμώτερα δὲ τὰ μείζω καὶ ἐμφανῇ τῇ αἰσθήσει, δηλὸν ὅτι καθάπερ ὑφήγηται [4] περὶ τούτων λεκτέον· ἐπαναφορὰν γὰρ ἔξομεν τῶν ἄλλων πρὸς ταῦτα μέχρι πόσου καὶ πῶς ἕκαστα μετέχει τῆς ὁμοιότητος. εἰλημμένων δὲ τῶν μερῶν μετὰ ταῦτα ληπτέον τὰς τούτων διαφορὰς· οὕτως γὰρ ἅμα καὶ ἡ οὐσία φανερά καὶ ἡ ὅλη τῶν γενῶν πρὸς ἄλληλα διάστασις.

Ἡ μὲν οὖν τῶν μεγίστων σχεδὸν εἴρηται· λέγω δ' οἷον ρίζης καυλοῦ τῶν ἄλλων· αἱ γὰρ δυνάμεις καὶ ὧν χάριν ἕκαστον ὕστερον ῥηθήσονται. ἐξ ὧν γὰρ καὶ ταῦτα καὶ τὰ ἄλλα σύγκειται πειρατέον εἰπεῖν ἀρξαμένους ἀπὸ τῶν πρώτων.

Πρῶτα δὲ ἐστὶ τὸ ὑγρὸν καὶ θερμόν· ἅπαν γὰρ φυτὸν ἔχει τινὰ ὑγρότητα καὶ θερμότητα σύμφυτον ὥσπερ καὶ ζῶον, ὧν ὑπολειπόντων γίνεται γῆρας καὶ φθίσις, τελείως δὲ ὑπολιπόντων θάνατος [5] καὶ αὖανσις. ἐν μὲν οὖν τοῖς πλείστοις ἀνώνυμος ἡ ὑγρότης, ἐν ἐνίοις δὲ ὠνομασμένη καθάπερ εἴρηται. τὸ αὐτὸ δὲ καὶ ἐπὶ τῶν ζώων ὑπάρχει· μόνη γὰρ ἡ τῶν ἐναίμων ὑγρότης ὠνόμασται, δι' ὃ καὶ διήρηται πρὸς τοῦτο στερήσει· τὰ μὲν γὰρ ἄναιμα τὰ δ' ἔναιμα λέγεται. ἐν τι μὲν οὖν τοῦτο τὸ μέρος καὶ τὸ τούτῳ συνηρημένον θερμόν.

Ἄλλα δ' ἤδη ἕτερα τῶν ἐντός, ἃ καθ' ἑαυτὰ μὲν ἐστὶν ἀνώνυμα, διὰ δὲ τὴν ὁμοιότητα ἀπαικάζεται τοῖς τῶν ζώων μορίοις. ἔχουσι γὰρ ὥσπερ ἱνας· ὃ ἐστὶ συνεχὲς καὶ σχιστὸν καὶ ἐπίμηκες, ἀπαράβλαστον [6] δὲ καὶ ἄβλαστον. ἔτι δὲ φλέβας. αὗται δὲ τὰ μὲν ἄλλα εἰσὶν ὅμοιαι τῇ ἰνί, μείζους δὲ καὶ παχύτεραι καὶ παραβλάστας ἔχουσαι καὶ ὑγρότητα. ἔτι ξύλον καὶ σάρξ. τὰ μὲν γὰρ ἔχει σάρκα τὰ δὲ ξύλον. ἐστὶ δὲ τὸ μὲν ξύλον σχιστόν, ἡ δὲ σὰρξ πάντῃ διαιρεῖται

ὥσπερ γῆ καὶ ὅσα γῆς· μεταξὺ δὲ γίνεται ἰνὸς καὶ φλεβός· φανερά δὲ ἡ φύσις αὐτῆς ἐν ἄλλοις τε καὶ ἐν τοῖς τῶν περικαρπίων δέρμασι. φλοιὸς δὲ καὶ μήτρα κυρίως μὲν λέγεται, δεῖ δὲ αὐτὰ καὶ τῷ λόγῳ διορίσαι. φλοιὸς μὲν οὖν ἐστὶ τὸ ἔσχατον καὶ χωριστὸν τοῦ ὑποκειμένου σώματος. μήτρα δὲ τὸ μεταξὺ τοῦ ξύλου, τρίτον ἀπὸ τοῦ φλοιοῦ οἶον ἐν τοῖς ὀστοῖς μυελός. καλοῦσι δὲ τινες τοῦτο καρδίαν, οἱ δ' ἐντεριώνην· ἔνιοι δὲ τὸ ἐντὸς τῆς μήτρας αὐτῆς καρδίαν, οἱ δὲ μυελόν.

Τὰ μὲν οὖν μόρια σχεδὸν ἐστὶ τοσαῦτα. σύγκειται δὲ τὰ ὕστερον ἐκ τῶν προτέρων· ξύλον μὲν ἐξ ἰνὸς καὶ ὕγροῦ, καὶ ἔνια σαρκός· ξυλοῦται γὰρ σκληρυνομένη, οἶον ἐν τοῖς φοίνιξι καὶ νάρθηξι καὶ εἴ τι ἄλλο ἐκχυλοῦται, ὥσπερ αἱ τῶν ῥαφανίδων ῥίζαι· μήτρα δὲ ἐξ ὕγροῦ καὶ σαρκός· φλοιὸς δὲ ὁ μὲν τις ἐκ πάντων τῶν τριῶν, οἶον ὁ τῆς δρυὸς καὶ αἰγείρου καὶ ἀπίου· ὁ δὲ τῆς ἀμπέλου ἐξ ὕγροῦ καὶ ἰνός· ὁ δὲ τοῦ φελλοῦ ἐκ σαρκὸς καὶ ὕγροῦ. πάλιν δὲ ἐκ τούτων σύνθετα τὰ μέγιστα καὶ πρῶτα ῥηθέντα καθαπερανεῖ μέλη, πλὴν οὐκ ἐκ τῶν αὐτῶν πάντα οὐδὲ ὡσαύτως ἀλλὰ διαφόρως.

Εἰλημμένων δὲ πάντων τῶν μορίων ὡς εἰπεῖν τὰς τούτων διαφορὰς πεिरατέον ἀποδιδόναι καὶ τὰς ὅλων τῶν δένδρων καὶ φυτῶν οὐσίαις.

[3.1] Ἐπεὶ δὲ συμβαίνει σαφεστέραν εἶναι τὴν μάθησιν διαιρουμένων κατὰ εἶδη, καλῶς ἔχει τοῦτο ποιεῖν ἐφ' ὧν ἐνδέχεται. πρῶτα δὲ ἐστὶ καὶ μέγιστα καὶ σχεδὸν ὑφ' ὧν πάντ' ἢ τὰ πλεῖστα περιέχεται τάδε, δένδρον θάμνος φρύγανον πόα.

Δένδρον μὲν οὖν ἐστὶ τὸ ἀπὸ ρίζης μονοστέλεχος πολύκλαδον ὀζωτὸν οὐκ εὐαπόλυτον, οἶον ἐλάα συκῇ ἄμπελος· θάμνος δὲ τὸ ἀπὸ ρίζης πολύκλαδον, οἶον βάτος παλίουρος. φρύγανον δὲ τὸ ἀπὸ ρίζης πολυστέλεχος καὶ πολύκλαδον οἶον καὶ θύμβρα καὶ πήγανον. πόα δὲ τὸ ἀπὸ ρίζης φυλλοφόρον προῖον ἀστέλεχος, οὗ ὁ κανὼς σπερμοφόρος, οἶον ὁ σῖτος καὶ τὰ λάχανα.

[2] Δεῖ δὲ τοὺς ὅρους οὕτως ἀποδέχεσθαι καὶ λαμβάνειν ὡς τύπῳ καὶ ἐπὶ τὸ πᾶν λεγομένους· ἔνια γὰρ ἴσως ἐπαλλάττειν δόξειε, τὰ δὲ καὶ παρὰ τὴν ἀγωγὴν ἀλλοιότερα γίνεσθαι καὶ ἐκβαίνειν τῆς φύσεως, οἶον μαλάχη τε εἰς ὕψος ἀναγομένη καὶ ἀποδενδρουμένη· συμβαίνει γὰρ τοῦτο καὶ οὐκ ἐν πολλῷ χρόνῳ ἀλλ' ἐν ἐξ ἢ ἐπὶ μῆσιν, ὥστε μῆκος καὶ πάχος δορατιαῖον γίνεσθαι, δι' ὃ καὶ βακτηρίαις αὐταῖς χρώνται, πλείονος δὲ χρόνου γινομένου κατὰ λόγον ἢ ἀπόδοσις· ὁμοίως δὲ καὶ ἐπὶ τῶν τεύτων· καὶ γὰρ ταῦτα λαμβάνει μέγεθος· ἔτι δὲ μᾶλλον ἄγνοι καὶ ὁ παλίουρος καὶ ὁ κιττός, ὥσθ' ὁμολογουμένως ταῦτα γίνεται [3] δένδρα· καὶ τοι θαμνώδη γέ ἐστιν. ὁ δὲ

μύρρινος μὴ ἀνακαθαίρομενος ἐκθαμνοῦται καὶ ἡ ἥρακλεωτική καρύα. δοκεῖ δὲ αὕτη γε καὶ τὸν καρπὸν βελτίω καὶ πλείω φέρειν ἐὰν ῥάβδους τις ἐὰ πλείους ὥς τῆς φύσεως θαμνώδους οὔσης. οὐ μονοστελέχης δ' ἂν δόξειεν οὐδ' ἡ μηλέα οὐδ' ἡ ροιὰ οὐδ' ἡ ἄπιος εἶναι, οὐδ' ὅλως ὅσα παραβλαστητικὰ ἀπὸ τῶν ριζῶν ἀλλὰ τῇ ἀγωγῇ τοιαῦτα παραιρουμένων τῶν ἄλλων. ἔνια δὲ καὶ ἐῷσι πολυστελέχη διὰ λεπτότητα, καθάπερ ῥόαν μηλέαν· ἐῷσι δὲ καὶ τὰς ἐλάας κοπάδας καὶ τὰς συκάς.

[4] Τάχα δ' ἂν τις φαίη καὶ ὅλως μεγέθει καὶ μικρότητι διαιρετέον εἶναι, τὰ δὲ ἰσχύϊ καὶ ἀσθενείᾳ καὶ πολυχρονιότητι καὶ ὀλιγοχρονιότητι. τῶν τε γὰρ φρυγανωδῶν καὶ λαχανωδῶν ἔνια μονοστελέχη καὶ οἷον δένδρου φύσιν ἔχοντα γίνεται, καθάπερ ῥάφανος πῆγανον, ὅθεν καὶ καλοῦσί τινες τὰ τοιαῦτα δενδρολάχανα, τὰ τε λαχανώδη πάντα ἢ τὰ πλείστα ὅταν ἐγκαταμείνῃ λαμβάνει τινὰς ὥσπερ ἀκρεμόνας καὶ γίνεται τὸ ὅλον ἐν σχήματι δενδρώδει πλὴν ὀλιγοχρονιώτερα.

[5] Διὰ δὲ ταῦτα ὥσπερ λέγομεν οὐκ ἀκριβολογητέον τῷ ὄρω ἀλλὰ τῷ τύπῳ ληπτέον τοὺς ἀφορισμούς· ἐπεὶ καὶ τὰς διαιρέσεις ὁμοίως, οἷον ἡμέρων ἀγρίων, καρποφόρων ἀκάρπων, ἀνθοφόρων ἀνανθῶν, ἀειφύλλων φυλλοβόλων. τὰ μὲν γὰρ ἄγρια καὶ ἡμερα παρὰ τὴν ἀγωγὴν εἶναι δοκεῖ· πᾶν γὰρ καὶ ἄγριον καὶ ἡμερόν φησιν Ἰππων γίνεσθαι τυγχάνον ἢ μὴ τυγχάνον θεραπείας. ἄκαρπα δὲ καὶ κάρπιμα καὶ ἀνθοφόρα καὶ ἀνανθῆ παρὰ τοὺς τόπους καὶ τὸν ἀέρα τὸν περιέχοντα· τὸν αὐτὸν δὲ τρόπον καὶ φυλλοβόλα καὶ ἀειφύλλα. περὶ γὰρ Ἑλεφαντίνην οὐδὲ τὰς ἀμπέλους οὐδὲ τὰς συκάς φασὶ φυλλοβολεῖν.

[6] Ἄλλ' ὅμως τοιαῦτα διαιρετέον· ἔχει γάρ τι τῆς φύσεως κοινὸν ὁμοίως ἐν δένδροις καὶ θάμνοις καὶ τοῖς φρυγανικοῖς καὶ ποιώδεσιν· ὑπὲρ ὧν καὶ τὰς αἰτίας ὅταν τις λέγῃ περὶ πάντων κοινῇ δῆλον ὅτι λεκτέον οὐχ ὀρίζοντα καθ' ἕκαστον· εὐλόγον δὲ καὶ ταύτας κοινὰς εἶναι πάντων. ἅμα δὲ καὶ φαίνεται τινα ἔχειν φυσικὴν διαφορὰν εὐθὺς ἐπὶ τῶν ἀγρίων καὶ τῶν ἡμέρων, εἴπερ ἔνια μὴ δύναται ζῆν ὥσπερ τὰ γεωργούμενα μηδ' ὅλως δέχεται θεραπείαν ἀλλὰ χεῖρω γίνεται, καθάπερ ἐλάτη πεύκη κήλαστρον καὶ ἀπλῶς ὅσα ψυχροὺς τόπους φιλεῖ καὶ χιονώδεις, ὡσαύτως δὲ καὶ τῶν φρυγανικῶν καὶ ποιωδῶν, οἷον κάππαρις καὶ θέρμος. ἡμερον δὲ καὶ ἄγριον δίκαιον καλεῖν ἀναφέροντα πρὸς τε ταῦτα καὶ ὅλως πρὸς τὸ ἡμερώτατον· [ὁ δ' ἄνθρωπος ἢ μόνον ἢ μάλιστα ἡμερον.]

[4.1] Φανεραὶ δὲ καὶ κατ' αὐτὰς τὰς μορφὰς αἱ διαφοραὶ τῶν ὅλων τε καὶ

μορίων, οἷον λέγω μέγεθος καὶ μικρότης, σκληρότης μαλακότης, λειότης τραχύτης, φλοιοῦ φύλλων τῶν ἄλλων, ἀπλῶς εὐμορφία καὶ δυσμορφία τις, ἔτι δὲ καὶ καλλικαρπία καὶ κακοκαρπία. πλείω μὲν γὰρ δοκεῖ τὰ ἄγρια φέρειν, ὥσπερ ἀχρὰς κότινος, καλλίω δὲ τὰ ἡμερα καὶ τοὺς χυλοὺς δὲ αὐτοὺς γλυκυτέρους καὶ ἡδίους καὶ τὸ ὅλον ὡς εἰπεῖν εὐκράτους μᾶλλον.

[2] Αὐταῖ τε δὴ φυσικαὶ τινες ὥσπερ εἴρηται διαφοραί, καὶ ἔτι δὴ μᾶλλον τῶν ἀκάρπων καὶ καρποφόρων καὶ φυλλοβόλων καὶ ἀειφύλλων καὶ ὅσα ἄλλα τοιαῦτα. πάντων δὲ ληπτέον αἰ καὶ τὰς κατὰ τοὺς τόπους· οὐ γὰρ οὐδ' οἷόν τε ἴσως ἄλλως. αἱ δὲ τοιαῦται δόξαιεν ἂν γενικόν τινα ποιεῖν χωρισμόν, οἷον ἐνύδρων καὶ χερσαίων, ὥσπερ ἐπὶ τῶν ζώων. ἔστι γὰρ ἓνια τῶν φυτῶν ἃ οὐ δύναται μὴ ἐν ὑγρῷ ζῆν· διήρηται δὲ ἄλλο κατ' ἄλλο γένος τῶν ὑγρῶν, ὥστε τὰ μὲν ἐν τέλμασι τὰ δὲ ἐν λίμναις τὰ δ' ἐν ποταμοῖς τὰ δὲ καὶ ἐν αὐτῇ τῇ θαλάττῃ φύεσθαι, τὰ μὲν ἐλάττω καὶ ἐν τῇ παρ' ἡμῖν τὰ δὲ μείζω περὶ τὴν ἐρυθράν. ἓνια δὲ ὥσπερ εἰ κάθυγρα καὶ ἔλεια, καθάπερ ἰτέα καὶ πλάτανος, τὰ δὲ οὐκ ἐν ὕδατι δυνάμενα ζῆν οὐδ' ὅλως ἀλλὰ διώκοντα τοὺς ξηροὺς τόπους· τῶν δ' ἐλαττόνων ἔστιν ἃ καὶ τοὺς αἰγιαλοὺς.

[3] Οὐ μὴν ἀλλὰ καὶ τούτων εἰ τις ἀκριβολογεῖσθαι θέλοι, τὰ μὲν ἂν εὗροι κοινὰ καὶ ὥσπερ ἀμφίβια, καθάπερ μυρίκην ἰτέαν κλήθραν, τὰ δὲ καὶ τῶν ὁμολογουμένων χερσαίων πεφυκότα ποτὲ ἐν τῇ θαλάττῃ βιοῦν, φοίνικα σκίλλαν ἀνθέρικον. ἀλλὰ τὰ τοιαῦτα καὶ ὅλως τὸ οὕτω σκοπεῖν οὐκ οἰκεῖως ἔστι σκοπεῖν· οὐδὲ γὰρ οὐδ' ἡ φύσις οὕτως οὐδ' ἐν τοῖς τοιοῦτοις ἔχει τὸ ἀναγκαῖον. τὰς μὲν οὖν διαιρέσεις καὶ ὅλως τὴν ἱστορίαν τῶν φυτῶν οὕτω ληπτέον. [ἅπαντα δ' οὖν καὶ ταῦτα καὶ τὰ ἄλλα διοίσει καθάπερ εἴρηται ταῖς τε τῶν ὅλων μορφαῖς καὶ ταῖς τῶν μορίων διαφοραῖς, ἢ τῷ ἔχειν τὰ δὲ μὴ ἔχειν, ἢ τῷ πλείω τὰ δ' ἐλάττω, ἢ τῷ ἀνομοίως ἢ ὅσοι τρόποι διήρηνται [4] πρότερον. οἰκεῖον δὲ ἴσως καὶ τοὺς τόπους συμπαραλαμβάνειν ἐν οἷς ἕκαστα πέφυκεν ἢ μὴ πέφυκε γίνεσθαι. μεγάλη γὰρ καὶ αὕτη διαφορὰ καὶ οὐχ ἥκιστα οἰκεῖα τῶν φυτῶν διὰ τὸ συνηρτῆσθαι τῇ γῇ καὶ μὴ ἀπολελύσθαι καθάπερ τὰ ζῶα.]

[5.1] Πειρατέον δ' εἰπεῖν τὰς κατὰ μέρος διαφορὰς ὡς ἂν καθόλου λέγοντας πρῶτον καὶ κοινῶς, εἶτα καθ' ἕκαστον, ὕστερον ἐπὶ πλεῖον ὥσπερ ἀναθεωροῦντας.

Ἔστι δὲ τὰ μὲν ὀρθοφυῇ καὶ μακροστελέχῃ καθάπερ ἐλάτῃ πεύκῃ κυπάριττος, τὰ δὲ σκολιώτερα καὶ βραχυστελέχῃ οἷον ἰτέα συκὴ ροιά, καὶ κατὰ πάχος δὲ καὶ λεπτότητα ὁμοίως. καὶ πάλιν τὰ μὲν μονοστελέχῃ τὰ δὲ

πολυστελέχη· τοῦτο δὲ ταῦτο τρόπον τινὰ καὶ τῷ παραβλαστητικῷ ἢ ἀπαράβλαστα εἶναι· καὶ πολυκλαδῇ καὶ ὀλιγόκλαδα καθάπερ ὁ φοῖνιξ, καὶ ἐν αὐτοῖς τούτοις ἔτι κατὰ ἰσχὺν ἢ πάχος ἢ [2] τὰς τοιαύτας διαφοράς. πάλιν τὰ μὲν λεπτόφλοια, καθάπερ δάφνη φύλورا, τὰ δὲ παχύφλοια, καθάπερ δρυς. ἔτι τὰ μὲν λειόφλοια, καθάπερ μηλέα συκῆ, τὰ δὲ τραχύφλοια, καθάπερ ἀγρία δρυς φελλὸς φοῖνιξ. πάντα δὲ νέα μὲν ὄντα λειοφλοιότερα, ἀπογηράσκοντα δὲ τραχυφλοιότερα, ἔνια δὲ καὶ ῥηξίφλοια, καθάπερ ἄμπελος, τὰ δὲ καὶ ὡς περιπίπτειν, οἷον ἀνδράχλη μηλέα κόμαρος. ἔστι δὲ καὶ τῶν μὲν σαρκώδης ὁ φλοιός, οἷον φελλοῦ δρυὸς αἰγείρου· τῶν δὲ ἰνώδης καὶ ἄσαρκος ὁμοίως δένδρων καὶ θάμνων καὶ ἐπετείων, οἷον ἀμπέλου καλάμου πυροῦ. καὶ τῶν μὲν πολύλοπος, οἷον φυλῦρας ἐλάτης ἀμπέλου λινοςπάρτου κρομύων, τῶν δὲ μονόλοπος, οἷον συκῆς καλάμου αἶρας. κατὰ μὲν δὴ τοὺς φλοιοὺς ἐν τούτοις αἱ διαφοραί.

[3] Τῶν δὲ ξύλων αὐτῶν καὶ ὅλως τῶν καυλῶν οἱ μὲν εἰσι σαρκώδεις, οἷον δρυὸς συκῆς, καὶ τῶν ἐλαττόνων ῥάμνου τεύτλου κωνείου· οἱ δὲ ἄσαρκοι, καθάπερ κέδρου λωτοῦ κυπαρίττου. καὶ οἱ μὲν ἰνώδεις· τὰ γὰρ τῆς ἐλάτης καὶ τοῦ φοίνικος ξύλα τοιαῦτα· τὰ δὲ ἄйна, καθάπερ τῆς συκῆς. ὡσαύτως δὲ καὶ τὰ μὲν φλεβώδη τὰ δ' ἄφλεβα. περὶ δὲ τὰ φρυγανικά καὶ θαμνώδη καὶ ὅλως τὰ ὑλήματα καὶ ἄλλας τις ἂν λάβοι διαφοράς· ὁ μὲν γὰρ κάλαμος γονατῶδες, ὁ δὲ βάτος καὶ ὁ παλίουρος ἀκανθώδη. ἡ δὲ τύφη καὶ ἔνια τῶν ἐλείων ἢ λιμναίων ὁμοίως ἀδιάφρακτα καὶ ὁμαλῇ, καθάπερ σχοῖνος. ὁ δὲ τοῦ κυτεῖρου καὶ βουτόμου καυλὸς ὁμαλότητά τινα ἔχει παρὰ τούτους· ἔτι δὲ μᾶλλον ἴσως ὁ τοῦ μύκητος.

[4] Αὐταὶ μὲν δὴ δόξαιεν ἂν ἐξ ὧν ἢ σύνθεσις. αἱ δὲ κατὰ τὰ πάθη καὶ τὰς δυνάμεις οἷον σκληρότης μαλακότης γλίσχρότης κραυρότης <πυκνότης> μανότης κουφότης βαρύτης καὶ ὅσα ἄλλα τοιαῦτα· ἡ μὲν γὰρ ἰτέα καὶ χλωρὸν εὐθὺ κοῦφον, ὥσπερ ὁ φελλός, ἡ δὲ πύξος καὶ ἡ ἔβενος οὐδὲ ἀνανθέντα. καὶ τὰ μὲν σχίζεται, καθάπερ τὰ τῆς ἐλάτης, τὰ δὲ εὐθραυστα μᾶλλον, οἷον τὰ τῆς ἐλάας. καὶ τὰ μὲν ἄοζα, οἷον τὰ τῆς ἀκτῆς. τὰ δὲ ὀζώδη, οἷον τὰ τῆς πεύκης καὶ ἐλάτης.

[5] Δεῖ δὲ καὶ τὰς τοιαύτας ὑπολαμβάνειν τῆς φύσεως. εὐσχιστον μὲν γὰρ ἡ ἐλάτη τῷ εὐθυπορεῖν, εὐθραυστον δὲ ἡ ἐλάα διὰ τὸ σκολιὸν καὶ σκληρόν. εὐκαμπτον δὲ ἡ φύλورا καὶ ὅσα ἄλλα διὰ τὸ γλίσχραν ἔχειν τὴν ὑγρότητα. βαρὺ δὲ ἡ μὲν πύξος καὶ ἡ ἔβενος ὅτι πυκνά, ἡ δὲ δρυς ὅτι γεῶδες. ὡσαύτως δὲ καὶ τὰ ἄλλα πάντα πρὸς τὴν φύσιν πῶς ἀνάγεται.

[6.1] Διαφέρουσι δὲ καὶ ταῖς μήτραις· πρῶτον μὲν εἰ ἓνια ἔχει ἢ μὴ ἔχει, καθάπερ τινὲς φασιν ἄλλα τε καὶ τὴν ἀκτὴν· ἔπειτα καὶ ἐν αὐτοῖς τοῖς ἔχουσι τῶν μὲν γὰρ ἐστὶ σαρκώδης τῶν δὲ ξυλώδης τῶν δὲ ὑμενώδης. καὶ σαρκώδης μὲν οἶον ἀμπέλου συκῆς μηλέας ροιᾶς ἀκτῆς νάρθηκος. ξυλώδης δὲ πίτυος ἐλάτης πεύκης, καὶ μάλιστα αὕτη διὰ τὸ ἐνδαδος εἶναι. τούτων δ' ἔτι σκληρότεραι καὶ πυκνότεραι κρανείας πρίνου δρυὸς κυτίσου συκαμίνου ἐβένου λωτοῦ.

[2] Διαφέρουσι δὲ αὐταὶ καὶ τοῖς χρώμασι· μέλαιναι γὰρ τῆς ἐβένου καὶ τῆς δρυὸς, ἣν καλοῦσι μελάνδρυνον. ἅπασαι δὲ σκληρότεραι καὶ κραυρότεραι τῶν ξύλων· δι' ὃ καὶ οὐχ ὑπομένουσι καμπήν. μανότεραι δὲ αἱ μὲν αἱ δ' οὔ. ὑμενώδεις δ' ἐν μὲν τοῖς δένδροις οὐκ εἰσὶν ἢ σπάνιοι, ἐν δὲ τοῖς θαμνώδεσι καὶ ὅλως τοῖς ὑλήμασιν οἶον καλάμῳ τε καὶ νάρθηκι καὶ τοῖς τοιοῦτοις εἰσὶν. ἔχει δὲ τὴν μήτραν τὰ μὲν μεγάλην καὶ φανεράν, ὡς πρίνος δρυὸς καὶ τᾶλλα προειρημένα, τὰ δ' ἀφανεστέραν, οἶον ἐλάα πύξος· οὐ γὰρ ἔστιν ἀφωρισμένην οὕτω λαβεῖν, ἀλλὰ καὶ φασὶ τινες οὐ κατὰ τὸ μέσον ἀλλὰ κατὰ τὸ πᾶν ἔχειν· ὥστε μὴ εἶναι τόπον ὠρισμένον· δι' ὃ καὶ ἓνια οὐδ' ἂν δόξειεν ὅλως ἔχειν· ἐπεὶ καὶ τοῦ φοίνικος οὐδεμία φαίνεται διαφορὰ κατ' οὐδέν.

[3] Διαφέρουσι δὲ καὶ ταῖς ρίζαις. τὰ μὲν γὰρ πολύρριζα καὶ μακρόρριζα, καθάπερ συκὴ δρυὸς πλάτανος· ἐὰν γὰρ ἔχωσι τόπον, ἐφ' ὅσονοῦν προέρχονται. τὰ δὲ ὀλιγόρριζα, καθάπερ ροιὰ μηλέα· τὰ δὲ μονόρριζα, καθάπερ ἐλάτη πεύκη· μονόρριζα δὲ οὕτως, ὅτι μίαν μεγάλην τὴν εἰς βάθος ἔχει μικρὰς δὲ ἀπὸ ταύτης πλείους. ἔχουσι δὲ καὶ τῶν μὴ μονορρίζων ἓνια τὴν ἐκ τοῦ μέσου μεγίστην καὶ κατὰ βάθους, ὥσπερ ἀμυγδαλῇ· ἐλάα δὲ μικρὰν ταύτην τὰς δὲ ἄλλας μείζους καὶ ὡς κεκαρκινωμένας. ἔτι δὲ τῶν μὲν παχεῖται μᾶλλον τῶν δὲ ἀνωμαλεῖς, καθάπερ δάφνης ἐλάας· [4] τῶν δὲ πᾶσαι λεπταί, καθάπερ ἀμπέλου. διαφέρουσι δὲ καὶ λειότητι καὶ τραχύτητι καὶ πυκνότητι. πάντων γὰρ αἱ ρίζαι μανότεραι τῶν ἄνω, πυκνότεραι δὲ ἄλλαι ἄλλων καὶ ξυλωδέστεραι· καὶ αἱ μὲν ἰνώδεις, ὡς αἱ τῆς ἐλάτης, αἱ δὲ σαρκώδεις μᾶλλον, ὥσπερ αἱ τῆς δρυὸς, αἱ δὲ οἶον ὀζώδεις καὶ θυσανώδεις, ὥσπερ αἱ τῆς ἐλάας· τοῦτο δὲ ὅτι τὰς λεπτὰς καὶ μικρὰς πολλὰς ἔχουσι καὶ ἀθρόας· ἐπεὶ πᾶσαί γε καὶ ταύτας ἀποφύουσιν ἀπὸ τῶν μεγάλων ἀλλ' οὐχ ὁμοίως ἀθρόας καὶ πολλὰς.

Ἔστι δὲ καὶ τὰ μὲν βαθύρριζα, καθάπερ δρυὸς, τὰ δ' ἐπιπολαιόρριζα, καθάπερ ἐλάα ροιὰ μηλέα κυπάριττος. ἔτι δὲ αἱ μὲν εὐθεῖαι καὶ ὁμαλεῖς, αἱ δὲ σκολιαὶ καὶ παραλλάττουσαι· τοῦτο γὰρ οὐ μόνον συμβαίνει διὰ τοὺς τόπους

τῷ μὴ εὐδοεῖν ἀλλὰ καὶ τῆς φύσεως αὐτῆς ἐστίν, ὥσπερ ἐπὶ τῆς δάφνης καὶ τῆς ἐλάας· ἡ δὲ συκὴ καὶ τὰ τοιαῦτα σκολιοῦται διὰ τὸ μὴ εὐδοεῖν.

[5] Ἄπασαι δ' ἔμμητροι καθάπερ καὶ τὰ στελέχη καὶ οἱ ἀκρεμόνες· καὶ εὐλογον ἀπὸ τῆς ἀρχῆς. εἰσὶ δὲ καὶ αἱ μὲν παραβλαστητικαὶ εἰς τὸ ἄνω, καθάπερ ἀμπέλου ρόας, αἱ δὲ ἀπαράβλαστοι, καθάπερ ἐλάτης κυπαρίττου πεύκης. αἱ αὐταὶ δὲ διαφοραὶ καὶ τῶν φρυγανικῶν καὶ τῶν ποιωδῶν καὶ τῶν ἄλλων· πλὴν εἰ ὅλως ἓνια μὴ ἔχει, καθάπερ ὕδνον μύκης πέξις κεραύνιον. τὰ μὲν πολύρριζα καθάπερ πυρὸς τίφη κριθή, πᾶν τὸ τοιοῦτο, καθάπερ εἰκαζούσαις· τὰ δ' ὀλιγόρριζα [6] καθάπερ τὰ χεδροπά. σχεδὸν δὲ καὶ τῶν λαχανωδῶν τὰ πλείστα μονόρριζα, οἷον ράφανος τεῦτλον σέλινον λάπαθος· πλὴν ἓνια καὶ ἀποφυάδας ἔχει μεγάλας, οἷον τὸ σέλινον καὶ τὸ τεῦτλον· καὶ ὥς ἂν κατὰ λόγον ταῦτα βαθυρριζότερα τῶν δένδρων. εἰσὶ δὲ τῶν μὲν σαρκώδεις, καθάπερ ραφανίδος γογγυλίδος ἄρου κρόκου· τῶν δὲ ξυλώδεις, οἷον εὐζώμου ὠκίμου· καὶ τῶν ἀγρίων δὲ τῶν πλείστων, ὅσων μὴ εὐθύς πλείους καὶ σχιζόμεναι, καθάπερ πυροῦ κριθῆς καὶ τῆς καλουμένης πόας. αὕτη γὰρ ἐν τοῖς ἐπετείοις καὶ ἐν τοῖς ποιωδεσιν ἡ διαφορὰ τῶν ῥιζῶν ὥστε τὰς μὲν εὐθύς σχιζέσθαι πλείους οὕσας καὶ ὁμαλεῖς, τῶν δὲ ἄλλων μίαν ἢ δύο τὰς μεγίστας καὶ ἄλλας ἀπὸ τούτων.

[7] Ὅλως δὲ πλείους αἱ διαφοραὶ τῶν ῥιζῶν ἐν τοῖς ὑλήμασι καὶ λαχανώδεσιν· εἰσὶ γὰρ αἱ μὲν ξυλώδεις, ὥσπερ αἱ τοῦ ὠκίμου· αἱ δὲ σαρκώδεις, ὥσπερ αἱ τοῦ τεύτλου καὶ ἔτι δὴ μᾶλλον τοῦ ἄρου καὶ ἀσφοδέλου καὶ κρόκου· αἱ δὲ ὥσπερ ἐκ φλοιοῦ καὶ σαρκός, ὥσπερ αἱ τῶν ραφανίδων καὶ γογγυλίδων· αἱ δὲ γονατώδεις, ὥσπερ αἱ τῶν καλάμων καὶ ἀγρώστεων καὶ εἴ τι καλαμῶδες, καὶ μόναι δὴ αὗται ἢ μάλισθ' ὅμοιαι τοῖς ὑπὲρ γῆς· ὥσπερ γὰρ κάλαμοι εἰσὶν ἐρριζωμένοι ταῖς λεπταῖς. αἱ δὲ λεπυρώδεις ἢ φλοιώδεις, οἷον αἶ τε τῆς σκίλλης καὶ τοῦ βολβοῦ καὶ ἔτι κρομύου καὶ τῶν τούτοις ὁμοίων. αἰεὶ γὰρ ἔστι περιαιρεῖν αὐτῶν.

[8] Πάντα δὲ τὰ τοιαῦτα δοκεῖ καθάπερ δύο γένη ῥιζῶν ἔχειν· τοῖς δὲ καὶ ὅλως τὰ κεφαλοβαρῇ καὶ κατάρριζα πάντα· τήν τε σαρκώδη ταύτην καὶ φλοιώδη, καθάπερ ἡ σκίλλα, καὶ τὰς ἀπὸ ταύτης ἀποπεφυκυίας· οὐ γὰρ λεπτότητι καὶ παχύτητι διαφέρουσι μόνον, ὥσπερ αἱ τῶν δένδρων καὶ τῶν λαχάνων, ἀλλ' ἄλλοιον ἔχουσι τὸ γένος. ἐκφανεστάτη δ' ἡδη ἢ τε τοῦ ἄρου καὶ ἡ τοῦ κυπείρου· ἡ μὲν γὰρ παχεῖα καὶ λεία καὶ σαρκώδης, ἡ δὲ λεπτή καὶ ἰνώδης. διόπερ ἀπορήσειεν ἂν τις εἰ ῥίζας τὰς τοιαύτας θετέον· ἢ μὲν γὰρ κατὰ γῆς δόξαιεν ἂν, ἢ δὲ ὑπεναντίως ἔχουσι ταῖς ἄλλαις οὐκ ἂν δόξαιεν. ἡ

μὲν γὰρ ῥίζα λεπτοτέρα πρὸς τὸ πόρρω καὶ αἰεὶ σύνοξυς· ἡ δὲ τῶν σκιλλῶν καὶ τῶν βολβῶν καὶ τῶν ἄρων ἀνάπαλιν.

[9] Ἔτι δ' αἱ μὲν ἄλλαι κατὰ τὸ πλάγιον ἀφιάσι ῥίζας, αἱ δὲ τῶν σκιλλῶν καὶ τῶν βολβῶν οὐκ ἀφιάσιν· οὐδὲ τῶν σκοροδῶν καὶ τῶν κρομύων. ὅλως δέ γε ἐν ταύταις αἱ κατὰ μέσον ἐκ τῆς κεφαλῆς ἡρτημένοι φαίνονται ῥίζαι καὶ τρέφονται. τοῦτο δ' ὥσπερ κῦμα ἢ καρπός, ὅθεν καὶ οἱ ἐγγεοτόκα λέγοντες οὐ κακῶς· ἐπὶ δὲ τῶν ἄλλων τοιοῦτο μὲν οὐδέν ἐστιν· ἐπεὶ δὲ πλεῖον ἢ φύσις ἢ κατὰ ῥίζαν ταύτη ἀπορίαν ἔχει. τὸ γὰρ δὴ πᾶν λέγειν τὸ κατὰ γῆς ῥίζαν οὐκ ὀρθόν· καὶ γὰρ ἂν ὁ καυλὸς τοῦ βολβοῦ καὶ ὁ τοῦ γηθίου καὶ ὅλως ὅσα κατὰ βάθους ἐστὶν εἴησαν ἂν ῥίζαι, καὶ τὸ ὕδρον δὲ καὶ ὁ καλοῦσί τινες ἀσχίον καὶ τὸ οὐῖγγον καὶ εἴ τι ἄλλο ὑπόγειόν ἐστιν· ὧν οὐδέν ἐστι ῥίζα· δυνάμει γὰρ δεῖ φυσικῇ διαιρεῖν καὶ οὐ τόπων.

[10] Τάχα δὲ τοῦτο μὲν ὀρθῶς λέγεται, ῥίζα δὲ οὐδὲν ἥττον ἐστὶν· ἀλλὰ διαφορὰ τις αὕτη τῶν ῥιζῶν, ὥστε τὴν μὲν τινα τοιαύτην εἶναι τὴν δὲ τοιαύτην καὶ τρέφεσθαι τὴν ἑτέραν ὑπὸ τῆς ἑτέρας. καίτοι καὶ αὐταὶ αἱ σαρκώδεις ἐοίκασιν ἔλκειν. τὰς γοῦν τῶν ἄρων πρὸ τοῦ βλαστάνειν στρέφουσι καὶ γίνονται μείζους καλυόμεναι διαβῆναι πρὸς τὴν βλάστησιν. ἐπεὶ ὅτι γε πάντων τῶν τοιούτων ἢ φύσις ἐπὶ τὸ κάτω μᾶλλον ῥέπει φανερόν· οἱ μὲν γὰρ καυλοὶ καὶ ὅλως τὰ ἄνω βραχέα καὶ ἀσθενῆ, τὰ δὲ κάτω μεγάλα καὶ πολλὰ καὶ ἰσχυρὰ οὐ μόνον ἐπὶ τῶν εἰρημένων ἀλλὰ καὶ ἐπὶ καλάμου καὶ ἀγρώστιδος καὶ ὅλως ὅσα καλαμώδη καὶ τούτοις ὅμοια. καὶ ὅσα δὴ ναρθηκώδη, καὶ τούτων ῥίζαι μεγάλαί καὶ σαρκώδεις.

[11] Πολλὰ δὲ καὶ τῶν ποιωδῶν ἔχει τοιαύτας ῥίζας, οἷον σπάλαξ κρόκος καὶ τὸ περδίκιον καλούμενον· καὶ γὰρ τοῦτο παχεῖας τε καὶ πλείους ἔχει τὰς ῥίζας ἢ φύλλα· καλεῖται δὲ περδίκιον διὰ τὸ τοὺς πέρδικας ἐγκυλίεσθαι καὶ ὀρύττειν. ὁμοίως δὲ καὶ τὸ ἐν Αἰγύπτῳ καλούμενον οὐῖγγον· τὰ μὲν γὰρ φύλλα μεγάλα καὶ ὁ βλαστὸς αὐτοῦ βραχύς, ἡ δὲ ῥίζα μακρὰ καὶ ἐστὶν ὥσπερ ὁ καρπός. διαφέρει τε καὶ ἐσθίεται, καὶ συλλέγουσι δὲ ὅταν [12] ὁ ποταμός ἀποβῇ στρέφοντες τὰς βώλους. φανερώτατα δὲ καὶ πλείστην ἔχοντα πρὸς τὰ ἄλλα διαφορὰν τὸ σίλφιον καὶ ἡ καλουμένη μαγύδαρις· ἀμφοτέρων γὰρ τούτων καὶ ἀπάντων τῶν τοιούτων ἐν ταῖς ῥίζαις μᾶλλον ἢ φύσις. ταῦτα μὲν οὖν ταύτη ληπτέα.

Ἐνταῦθα δὲ τῶν ῥιζῶν πλείω δόξαιεν ἂν ἔχειν διαφορὰν παρὰ τὰς εἰρημένας· οἷον αἶ τε τῆς ἀραχίδνης καὶ τοῦ ὁμοίου τῷ ἀράκῳ· φέρουσι γὰρ ἀμφοτέραι καρπὸν οὐκ ἐλάττω τοῦ ἄνω· καὶ μίαν μὲν ῥίζαν τὸ ἀρακῶδες τοῦτο παχεῖαν

ἔχει τὴν κατὰ βάθος, τὰς δ' ἄλλας ἐφ' ὧν ὁ καρπὸς λεπτοτέρας καὶ ἐπ' ἄκρῳ [καί] σχιζομένας πολλαχῇ· φιλεῖ δὲ μάλιστα χωρία τὰ ὑφάμμα· φύλλον δὲ οὐδέτερον ἔχει τούτων οὐδ' ὅμοια τοῖς φύλλοις, ἀλλ' ὥσπερ ἀμφίκαρπα μᾶλλον ἐστίν· ὁ καὶ φαίνεται θαυμάσιον. αἱ μὲν οὖν φύσεις καὶ δυνάμεις τοσαύτας ἔχουσι διαφοράς.

[7.1] Αὐξάνεσθαι δὲ πάντων δοκοῦσιν αἱ ρίζαι πρότερον τῶν ἄνω· καὶ γὰρ φύεται εἰς βάθος· οὐδεμία δὲ καθήκει πλέον ἢ ὅσον ὁ ἥλιος ἐφικνεῖται· τὸ γὰρ θερμὸν τὸ γεννῶν· οὐ μὴν ἀλλὰ ταῦτα μεγάλα συμβάλλεται πρὸς βαθυρριζίαν καὶ ἔτι μᾶλλον πρὸς μακρορριζίαν, ἢ τῆς χώρας φύσις ἐὰν ἦ κούφη καὶ μανὴ καὶ εὐδίοδος· ἐν γὰρ ταῖς τοιαύταις πορρωτέρω καὶ μείζους αἱ αὐξήσεις. φανερόν δὲ ἐπὶ τῶν ἡμερωμάτων· ἔχοντα γὰρ ὕδωρ ὅπου οὖν δίδεισιν ὡς εἰπεῖν, ἐπειδὴν ὁ τόπος ἦ κενὸς καὶ μηδὲν τὸ ἀντιστατοῦν. ἤγουν ἐν τῷ Λυκείῳ ἢ πλάτανος ἢ κατὰ τὸν ὀχετὸν ἔτι νέα οὖσα ἐπὶ τρεῖς καὶ τριάκοντα πῆχεις ἀφῆκεν ἔχουσα τόπον τε ἅμα καὶ τροφήν.

[2] Δόξειε δὲ ὡς εἰπεῖν ἡ συκὴ μακρορριζότατον εἶναι καὶ ὅλως δὲ μᾶλλον τὰ μανὰ καὶ εὐθύρριζα. πάντα δὲ τὰ νεώτερα τῶν παλαιῶν, ἐὰν εἰς ἀκμὴν ἤκωσιν, ἤδη βαθυρριζότερα καὶ μακρορριζότερα. συμφθίνουσι γὰρ καὶ αἱ ρίζαι τῷ ἄλλῳ σώματι. πάντων δὲ ὁμοίως οἱ χυλοὶ τοῖς φυτοῖς δεινότεροι, τοῖς δὲ ὡς ἐπίπαν· δι' ὃ καὶ ἐνίων πικραὶ ὧν οἱ καρποὶ γλυκεῖς· αἱ δὲ καὶ φαρμακώδεις· ἔναι δ' εὐώδεις, ὥσπερ αἱ τῆς ἵριδος.

[3] Ἰδία δὲ ρίζης φύσις καὶ δύναμις ἢ τῆς Ἰνδικῆς συκῆς· ἀπὸ γὰρ τῶν βλαστῶν ἀφίησι, μέχρι οὗ ἂν συνάψῃ τῇ γῇ καὶ ριζωθῇ, καὶ γίνεται περὶ τὸ δένδρον κύκλῳ συνεχὲς τὸ τῶν ριζῶν οὐχ ἀπτόμενον τοῦ στελέχους ἀλλ' ἀφεστηκός.

Παραπλήσιον δὲ τούτῳ μᾶλλον δὲ τρόπον τινὰ θαυμασιώτερον εἴ τι ἐκ τῶν φύλλων ἀφίησι ρίζαν, οἷον φασὶ περὶ Ὀποῦντα ποιάριον εἶναι, ὃ καὶ ἐσθίεσθαι ἐστίν ἡδύ. τὸ γὰρ αὖ τῶν θερμῶν θαυμαστὸν ἦττον, ὅτι ἂν ἐν ὕλῃ βαθείᾳ σπαρῇ διείρει τὴν ρίζαν πρὸς τὴν γῆν καὶ βλαστάνει διὰ τὴν ἰσχύν. ἀλλὰ δὴ τὰς μὲν τῶν ριζῶν διαφορὰς ἐκ τούτων θεωρητέον.

[8.1] Τῶν δένδρων τὰς τοιαύτας ἂν τις λάβοι διαφοράς. ἔστι γὰρ τὰ μὲν ὀζώδη τὰ δ' ἄνοζα καὶ φύσει καὶ τόπῳ κατὰ τὸ μᾶλλον καὶ ἦττον. ἄνοζα δὲ λέγω οὐχ ὥστε μὴ ἔχειν ὅλως - οὐδὲν γὰρ τοιοῦτο δένδρον, ἀλλ' εἴπερ, ἐπὶ τῶν ἄλλων οἷον σχοῖνος τύφη κύπειρος ὅλως ἐπὶ τῶν λιμνωδῶν - ἀλλ' ὥστε ὀλίγους ἔχειν. φύσει μὲν οἷον ἀκτὴ δάφνη συκὴ ὅλως πάντα τὰ λειόφλοια καὶ ὅσα κοῖλα καὶ μανὰ. ὀζῶδες δὲ ἐλάα πεύκη κότινος· τούτων δὲ τὰ μὲν ἐν

παλισκίοις καὶ νηνέμοις καὶ ἐφύδροις, τὰ δὲ ἐν εὐηλίοις καὶ χειμερίοις καὶ πνευματώδεσι καὶ λεπτοῖς καὶ ξηροῖς· τὰ μὲν γὰρ ἀνοζότερα, τὰ δὲ ὀζωδέστερα τῶν ὁμογενῶν. ὅλως δὲ ὀζωδέστερα τὰ ὀρεινὰ τῶν πεδεινῶν καὶ τὰ ξηρὰ τῶν ἐλείων.

[2] Ἔτι δὲ κατὰ τὴν φυτείαν τὰ μὲν πυκνὰ ἄνοζα καὶ ὀρθά, τὰ δὲ μανὰ ὀζωδέστερα καὶ σκολιώτερα· συμβαίνει γὰρ ὥστε τὰ μὲν ἐν παλισκίῳ εἶναι τὰ δὲ ἐν εὐηλίῳ. καὶ τὰ ἄρρενα δὲ τῶν θηλειῶν ὀζωδέστερα ἐν οἷς ἐστὶν ἄμφω, οἷον κυπάριττος ἐλάτη ὀστρυῖς κρानεία· καλοῦσι γὰρ γένος τι θηλυκρανείαν· καὶ τὰ ἄγρια δὲ τῶν ἡμέρων, καὶ ἀπλῶς καὶ τὰ ὑπὸ ταῦτὸ γένος, οἷον κότινος ἐλάας καὶ ἐρινεὸς συκῆς καὶ ἀχρὰς ἀπίου. πάντα γὰρ ταῦτα ὀζωδέστερα· καὶ ὡς ἐπὶ τὸ πολὺ πάντα τὰ πυκνὰ τῶν μανῶν· καὶ γὰρ τὰ ἄρρενα πυκνότερα καὶ τὰ ἄγρια· πλην εἴ τι διὰ πυκνότητα παντελῶς ἄνοζον ἢ ὀλίγοζον, οἷον πύζος λωτός.

[3] Εἰσὶ δὲ τῶν μὲν ἄτακτοι καὶ ὡς ἔτυχεν οἱ ὄζοι, τῶν δὲ τεταγμένοι καὶ τῷ διαστήματι καὶ τῷ πλήθει καθάπερ εἴρηται· δι' ὃ καὶ ταξιόζωτα ταῦτα καλοῦσιν. τῶν μὲν γὰρ οἷον δι' ἴσου τῶν δὲ μείζον αἰεὶ τὸ πρὸς τῷ πάχει. καὶ τοῦτο κατὰ λόγον. ὅπερ μάλιστα ἐνδηλον καὶ ἐν τοῖς κοτίνοις καὶ ἐν τοῖς καλάμοις· τὸ γὰρ γόνυ καθάπερ ὄζος. καὶ οἱ μὲν κατ' ἀλλήλους, ὥσπερ οἱ τῶν κοτίνων, οἱ δ' ὡς ἔτυχεν. ἔστι δὲ τὰ μὲν δίοζα, τὰ δὲ τρίοζα, τὰ δὲ πλείους ἔχοντα· ἓνα δὲ πεντάοζα ἔστι. καὶ τῆς μὲν ἐλάτης ὀρθοὶ καὶ οἱ ὄζοι καὶ οἱ [4] κλάδοι ὥσπερ ἐμπεπηγότες, τῶν δὲ ἄλλων οὐ. δι' ὃ καὶ ἰσχυρὸν ἢ ἐλάτη. ἰδιώτατοι δὲ οἱ τῆς μηλέας· ὅμοιοι γὰρ θηρίων προσώποις, εἷς μὲν ὁ μέγιστος ἄλλοι δὲ περὶ αὐτὸν μικροὶ πλείους. εἰσὶ δὲ τῶν ὄζων οἱ μὲν τυφλοί, οἱ δὲ γόνιμοι. λέγω δὲ τυφλοὺς ἅφ' ὧν μηδεὶς βλαστός. οὗτοι δὲ καὶ φύσει καὶ πηρώσει γίνονται, ὅταν ἢ μὴ λυθῇ καὶ ἐκβιάζηται ἢ καὶ ἀποκοπῇ καὶ οἷον ἐπικαυθεὶς πηρωθῇ· γίνονται δὲ μᾶλλον ἐν τοῖς παχέσι τῶν ἀκρεμόνων, ἐνίων δὲ καὶ ἐν τοῖς στελέχεσιν. ὅλως δὲ καὶ τοῦ στελέχους καὶ τοῦ κλάδου καθ' ὃ ἂν ἐπικόψη ἢ ἐπιτέμη τις, ὄζος γίνεται καθαπερανεὶ διαιρῶν τὸ ἐν καὶ ποιῶν ἑτέραν ἀρχήν, εἴτε διὰ τὴν πῆρωσιν εἴτε δι' ἄλλην αἰτίαν· οὐ γὰρ δὴ κατὰ φύσιν τὸ ὑπὸ τῆς πληγῆς.

[5] Αἰεὶ δὲ ἐν ἅπασιν οἱ κλάδοι φαίνονται πολυοζότεροι διὰ τὸ μήπω τὰνὰ μέσον προσηυξῆσθαι, καθάπερ καὶ τῆς συκῆς οἱ νεόβλαστοι τραχύτατοι καὶ τῆς ἀμπέλου τὰ ἄκρα τῶν κλημάτων. ὡς γὰρ ὄζος ἐν τοῖς ἄλλοις οὕτω καὶ ὀφθαλμὸς ἐν ἀμπέλῳ καὶ ἐν καλάμῳ γόνυ ... ἐνίοις δὲ καὶ οἷον κράδα γίνονται, καθάπερ πτελέα καὶ δρυὶ καὶ μάλιστα ἐν πλατάνῳ· ἐὰν δὲ ἐν τραχέσι

καὶ ἀνύδροις καὶ πνευματώδεσι καὶ παντελῶς. πάντως δὲ πρὸς τῇ γῇ καὶ οἶον τῇ κεφαλῇ τοῦ στελέχους ἀπογηρασκόντων τὸ πάθος τοῦτο γίνεται.

[6] Ἐνια δὲ καὶ ἴσχει τοὺς καλουμένους ὑπὸ τινων ἢ γόγγρους ἢ τὸ ἀνάλογον, οἶον ἢ ἐλάα· κυριώτατον γὰρ ἐπὶ ταύτης τοῦτο τοῦνομα καὶ πάσχειν δοκεῖ μάλιστα τὸ εἰρημένον· καλοῦσι δ' ἔνιοι τοῦτο πρέμνον οἱ δὲ κροτώνην οἱ δὲ ἄλλο ὄνομα. τοῖς δὲ εὐθέσι καὶ μονορρίζοις καὶ ἀπαραβλάστοις οὐ γίνεται τοῦθ' ὅλως ἢ ἥττον· [φοῖνιξ δὲ παραβλαστητικόν·] ἢ δὲ ἐλάα καὶ ὁ κότινος καὶ τὰς οὐλότητας ἰδίᾳς ἔχουσι τὰς ἐν τοῖς στελέχεσι.

[9.1] Ἔστι μὲν οὖν τὰ μὲν ὥς εἰς μῆκος αὐξητικὰ μάλιστ' ἢ μόνον, οἶον ἐλάτη φοῖνιξ κυπάριτος καὶ ὅλως τὰ μονοστελέχη καὶ ὅσα μὴ πολύρριζα μηδὲ πολύκλαδα· <ἢ δὲ φοῖνιξ ἀπαραβλαστητικόν> τὰ δὲ ὁμοῖα τούτοις ἀνὰ λόγον καὶ εἰς βάθος. ἔνια δ' εὐθύς σχίζεται, οἶον ἢ μηλέα· τὰ δὲ πολύκλαδα καὶ μείζω τὸν ὄγκον ἔχει τὸν ἄνω, καθάπερ ῥόα· οὐ μὴν ἄλλ' οὖν μέγιστα γε συμβάλλεται πρὸς ἕκαστον ἡ ἀγωγή καὶ ὁ τόπος καὶ ἡ τροφή. σημεῖον δ' ὅτι ταῦτα πυκνὰ μὲν ὄντα μακρὰ καὶ λεπτὰ γίνεται, μανὰ δὲ παχύτερα καὶ βραχύτερα· καὶ ἐὰν μὲν εὐθύς τις ἀφιῇ τοὺς ὄζους βραχέα, ἐὰν δὲ ἀνακαθαίρη μακρά, καθάπερ ἡ ἄμπελος.

[2] Ἰκανὸν δὲ κάκεῖνο πρὸς πίστιν ὅτι καὶ τῶν λαχάνων ἔνια λαμβάνει δένδρου σχῆμα, καθάπερ εἵπομεν τὴν μαλάχην καὶ τὸ τεῦτλον· ἅπαντα δ' ἐν τοῖς οἰκείοις τόποις εὐαυξή ... καὶ τὸ αὐτὸ κάλλιστον. ἐπεὶ καὶ τῶν ὁμογενῶν ἀνοζότερα καὶ μείζω καὶ καλλίω τὰ ἐν τοῖς οἰκείοις, οἶον ἐλάτη ἢ Μακεδονικὴ τῆς Παρνασίας καὶ τῶν ἄλλων. ἅπαντα δὲ ταῦτα καὶ ὅλως ἢ ὕλη ἢ ἀγρία καλλίων καὶ πλείων τοῦ ὅρου ἐν τοῖς προσβορείοις ἢ ἐν τοῖς πρὸς μεσημβρίαν.

[3] Ἔστι δὲ τὰ μὲν ἀείφυλλα τὰ δὲ φυλλοβόλα. τῶν μὲν ἡμέρων ἀείφυλλα ἐλάα φοῖνιξ δάφνη μύρρινος πεύκης τι γένος κυπάριτος· τῶν δ' ἀγρίων ἐλάτη πεύκη ἄρκευθος μίλος θυία καὶ ἦν Ἀρκάδες καλοῦσι φελλόδρυν φιλυρέα κέδρος πίτυς ἀγρία μυρική πύξος πρῖνος κήλαστρον φυλύκη ὀξυάκανθος ἀφάρκη, ταῦτα δὲ φύεται περὶ τὸν Ὀλυμπον, ἀνδράχλη κόμαρος τέρμινθος ἀγρία δάφνη. δοκεῖ δ' ἡ ἀνδράχλη καὶ ὁ κόμαρος τὰ μὲν κάτω φυλλοβολεῖν τὰ δὲ ἔσχατα τῶν ἀκρεμόνων ἀείφυλλα ἔχειν, ἐπιφύειν δὲ ἀεὶ τοὺς ἀκρεμόνας.

[4] Τῶν μὲν οὖν δένδρων ταῦτα. τῶν δὲ θαμνωδῶν κιττὸς βάτος ῥάμνος κάλαμος κεδρίς· ἔστι γάρ τι μικρὸν ὃ οὐ δενδροῦται. τῶν δὲ φρυγανικῶν καὶ ποιωδῶν πήγανον ῥάφανος ῥοδωνία ἰωνία ἀβρότονον ἀμάρακον ἔρπυλλος ὀρίγανον σέλινον ἱπποσέλινον μήκων καὶ τῶν ἀγρίων εἶδη πλείω. διαμένει δὲ

καὶ τούτων ἓνια τοῖς ἄκροις τὰ δὲ ἄλλα ἀποβάλλει οἷον ὀρίγανον σέλινον ... ἐπεὶ καὶ τὸ πῆγανον κακοῦται καὶ ἀλλάττεται.

[5] Πάντα δὲ καὶ τῶν ἄλλων τὰ ἀείφυλλα στενοφυλλότερα καὶ ἔχοντά τινα λιπαρότητα καὶ εὐωδίαν. ἓνια δ' οὐκ ὄντα τῇ φύσει παρὰ τὸν τόπον ἐστὶν ἀείφυλλα, καθάπερ ἐλέχθη περὶ τῶν ἐν Ἑλεφαντίνῃ καὶ Μέμφει· κατωτέρω δ' ἐν τῷ Δέλτα μικρὸν πάνυ χρόνον διαλείπει τοῦ μὴ ἀεὶ βλαστάνειν. ἐν Κρήτῃ δὲ λέγεται πλάτανόν τινα εἶναι ἐν τῇ Γορτυναίᾳ πρὸς πηγῇ τινὶ ἣ οὐ φυλλοβολεῖ· μυθολογοῦσι δὲ ὡς ὑπὸ ταύτῃ ἐμίγη τῇ Εὐρώπῃ ὁ Ζεὺς· τὰς δὲ πλησίας πάσας φυλλοβολεῖν. ἐν δὲ Συβάρει δρυς ἐστὶν εὐσύνοπτος ἐκ τῆς πόλεως ἣ οὐ φυλλοβολεῖ· φασὶ δὲ οὐ βλαστάνειν αὐτὴν ἅμα ταῖς ἄλλαις ἀλλὰ μετὰ Κύνα. λέγεται δὲ καὶ ἐν Κύπρῳ πλάτανος εἶναι τοιαύτη.

[6] Φυλλοβολεῖ δὲ πάντα τοῦ μετοπώρου καὶ μετὰ τὸ μετόπωρον, πλὴν τὸ μὲν θάττον τὸ δὲ βραδύτερον ὥστε καὶ τοῦ χειμῶνος ἐπιλαμβάνειν. οὐκ ἀνάλογοι δὲ αἱ φυλλοβολαὶ ταῖς βλαστήσεσιν, ὥστε τὰ πρότερον βλαστήσαντα πρότερον φυλλοβολεῖν, ἀλλ' ἓνια πρωῒβλαστεῖ μὲν οὐδὲν δὲ προτερεῖ τῶν ἄλλων, ἀλλὰ τινων καὶ ὑστερεῖ, καθάπερ ἡ ἀμυγδαλῇ.

[7] Τὰ δὲ ὀψιβλαστεῖ μὲν οὐδὲν δὲ ὡς εἰπεῖν ὑστερεῖ τῶν ἄλλων, ὥσπερ ἡ συκάμινος. δοκεῖ δὲ καὶ ἡ χώρα συμβάλλεσθαι καὶ ὁ τόπος ὁ ἐνικμος πρὸς τὸ διαμένειν. τὰ γὰρ ἐν τοῖς ξηροῖς καὶ ὅλως λεπτογείοις πρότερα φυλλοβολεῖ καὶ τὰ πρεσβύτερα δὲ τῶν νέων. ἓνια δὲ καὶ πρὸ τοῦ πεπᾶναι τὸν καρπὸν ἀποβάλλει τὰ φύλλα, καθάπερ αἱ ὄψιαι συκαὶ καὶ ἀχράδες.

Τῶν δ' ἀειφύλλων ἡ ἀποβολὴ καὶ ἡ αὖανσις κατὰ μέρος· οὐ γὰρ διὰ ταῦτα αἰεὶ διαμένει, ἀλλὰ τὰ μὲν ἐπιβλαστάνει τὰ δ' ἀφαναίνεται. τοῦτο δὲ περὶ τροπὰς μάλιστα γίνεται θερινάς. εἰ δὲ τινων καὶ μετ' Ἀρκτοῦρον ἢ καὶ κατ' ἄλλην ὥραν ἐπισκεπτέον. καὶ τὰ μὲν περὶ τὴν φυλλοβολίαν οὕτως ἔχει.

[10.1] Τὰ δὲ φύλλα τῶν μὲν ἄλλων δένδρων ὅμοια πάντων αὐτὰ ἑαυτοῖς, τῆς δὲ λεύκης καὶ τοῦ κιττοῦ καὶ τοῦ καλουμένου κρότωνος ἀνόμοια καὶ ἑτεροσχήμονα· τὰ μὲν γὰρ νέα περιφερῆ τὰ δὲ παλαιότερα γωνοειδῆ, καὶ εἰς τοῦτο ἡ μετάστασις πάντων. τοῦ δὲ κιττοῦ ἀνάπαλιν νέου μὲν ὄντος ἐγγωνιώτερα πρεσβυτέρου δὲ περιφερέστερα· μεταβάλλει γὰρ καὶ οὗτος. ἴδιον δὲ καὶ τὸ τῇ ἐλάᾳ καὶ τῇ φιλύρᾳ καὶ τῇ πετέλᾳ καὶ τῇ λεύκῃ συμβαῖνον· στρέφειν γὰρ δοκοῦσιν τὰ ὕπτια μετὰ τροπὰς θερινάς, καὶ τούτῳ γνωρίζουσιν ὅτι γεγένηται τροπαί.

[2] πάντα δὲ τὰ φύλλα διαφέρει κατὰ τὰ ὕπτια καὶ τὰ πρηνῆ. καὶ τῶν μὲν ἄλλων τὰ ὕπτια ποιωδέστερα καὶ λειότερα· τὰς γὰρ ἵνας καὶ τὰς φλέβας ἐν

τοῖς πρᾶνεσιν ἔχουσιν, ὥσπερ ἡ χεὶρ «τὰ ἄρθρα» τῆς δ' ἐλάας λευκότερα καὶ ἥττον λεῖα ἐνίοτε καὶ τὰ ὕπτια. πάντα δὴ ἡ τά γε πλεῖστα ἐκφανῇ ἔχει τὰ ὕπτια καὶ ταῦτα γίνεται τῷ ἡλίῳ φανερά. καὶ στρέφεται τὰ πολλὰ πρὸς τὸν ἥλιον· δι' ὃ καὶ οὐ ράδιον εἰπεῖν ὁπότερον πρὸς τῷ κλῶνι μᾶλλον ἐστίν· ἡ μὲν γὰρ ὑπτιότης μᾶλλον δοκεῖ ποιεῖν τὸ πρᾶνές, ἡ δὲ φύσις οὐχ ἥττον βούλεται τὸ ὕπτιον, ἄλλως τε καὶ ἡ ἀνάκλασις διὰ τὸν ἥλιον· ἴδοι δ' ἂν τις ὅσα πυκνὰ καὶ κατ' ἄλληλα, καθάπερ τὰ τῶν μυρρίνων.

[3] Οἷονται δέ τινες καὶ τὴν τροφὴν τῷ ὑπτίῳ διὰ τοῦ πρᾶνοῦς εἶναι, διὰ τὸ ἐνικμον ἀεὶ τοῦτο καὶ χνοῶδες εἶναι, οὐ καλῶς λέγοντες. ἀλλὰ τοῦτο μὲν ἴσως συμβαίνει χωρὶς τῆς ἰδίας φύσεως καὶ διὰ τὸ μὴ ὁμοίως ἡλιοῦσθαι, ἡ δὲ τροφή διὰ τῶν φλεβῶν ἢ ἰνῶν ὁμοίως ἀμφοτέροις· ἐκ θατέρου δ' εἰς θάτερον οὐκ εὐλογον μὴ ἔχουσι πόρους μηδὲ βάθος δι' οὗ· ἀλλὰ περὶ μὲν τροφῆς διὰ τίνων ἕτερος λόγος.

[4] Διαφέρουσι δὲ καὶ τὰ φύλλα πλείοσι διαφοραῖς· τὰ μὲν γὰρ ἐστὶ πλατύφυλλα, καθάπερ ἄμπελος συκὴ πλάτανος, τὰ δὲ στενόφυλλα, καθάπερ ἐλάα ρόα μύρρινος· τὰ δ' ὥσπερ ἀκανθόφυλλα, καθάπερ πεύκη πίτυς κέδρος· τὰ δ' οἷον σαρκόφυλλα· τοῦτο δ' ὅτι σαρκῶδες ἔχουσι τὸ φύλλον, οἷον κυπάριττος μυρὶκη μηλέα, τῶν δὲ φρυγανικῶν κνέωρος στοιβὴ καὶ ποιωδῶν ἀεΐζων πόλιον· [τοῦτο δὲ καὶ πρὸς τοὺς σήτας τοὺς ἐν τοῖς ἱματίοις ἀγαθόν·] τὰ γὰρ αὐτῶν τευτλίων ἢ ραφάνων ἄλλον τρόπον σαρκῶδη καὶ τὰ τῶν πηγανίων καλουμένων· ἐν πλάτει γὰρ καὶ οὐκ ἐν στρογγυλότητι τὸ σαρκῶδες. καὶ τῶν θαμνωδῶν [5] δὲ ἡ μυρὶκη σαρκῶδες τὸ φύλλον ἔχει. ἔνια δὲ καὶ καλαμόφυλλα, καθάπερ ὁ φοῖνιξ καὶ ὁ κόϊξ καὶ ὅσα τοιαῦτα· ταῦτα δὲ ὡς καθ' ὅλου εἰπεῖν γωνιόφυλλα· καὶ γὰρ ὁ κάλαμος καὶ ὁ κύπειρος καὶ ὁ βούτομος καὶ τᾶλλα δὲ τῶν λιμνωδῶν τοιαῦτα· πάντα δὲ ὥσπερ ἐκ δυοῖν σύνθετα καὶ τὸ μέσον οἷον τρόπις, οὗ ἐν τοῖς ἄλλοις μέγας πόρος ὁ μέσος. διαφέρουσι δὲ καὶ τοῖς σχήμασι· τὰ μὲν γὰρ περιφερῆ, καθάπερ τὰ τῆς ἀπίου, τὰ δὲ προμηκέστερα, καθάπερ τὰ τῆς μηλέας· τὰ δὲ εἰς ὅξυ προήκοντα καὶ παρακανθίζοντα, καθάπερ τὰ τοῦ μίλακος. καὶ ταῦτα μὲν ἄσχιστα· «τὰ δὲ σχιστὰ» καὶ οἷον πριονώδη, καθάπερ τὰ τῆς ἐλάτης καὶ τὰ τῆς πετρίδος· τρόπον δέ τινα σχιστὰ καὶ τὰ τῆς ἀμπέλου, καὶ τὰ τῆς συκῆς [6] δὲ ὥσπερ ἂν εἴποι τις κορωνοποδώδη. ἔνια δὲ καὶ ἐντομὰς ἔχοντα, καθάπερ τὰ τῆς πετελέας καὶ τὰ τῆς Ἡρακλεωτικῆς καὶ τὰ τῆς δρυός. τὰ δὲ καὶ παρακανθίζοντα καὶ ἐκ τοῦ ἄκρου καὶ ἐκ τῶν πλαγίων, οἷον τὰ τῆς πρίνου καὶ τὰ τῆς δρυός καὶ μίλακος καὶ βάτου καὶ παλιούρου καὶ τὰ τῶν ἄλλων. ἀκανθῶδες δὲ ἐκ τῶν

ἄκρων καὶ τὸ τῆς πεύκης καὶ πίτυος καὶ ἐλάτης ἔτι δὲ κέδρου καὶ κεδρίδος. φυλλάκανθον δὲ ὅλως ἐν μὲν τοῖς δένδροις οὐκ ἔστιν οὐδὲν ὧν ἡμεῖς ἴσμεν, ἐν δὲ τοῖς ἄλλοις ὑλήμασιν ἔστιν, οἷον ἢ τε ἄκορνα καὶ ἡ δρυπὶς καὶ ὁ ἄκανος καὶ σχεδὸν ἅπαν τὸ τῶν ἀκανωδῶν γένος· ὥσπερ γὰρ φύλλον ἔστιν ἡ ἄκανθα πᾶσιν· εἰ δὲ μὴ φύλλα τις ταῦτα θήσει, συμβαίνοι ἂν ὅλως ἄφυλλα εἶναι, ἐνίοις δὲ ἄκανθαν μὲν εἶναι φύλλον δὲ ὅλως οὐκ ἔχειν, καθάπερ ὁ ἀσφάραγος.

[7] Πάλιν δ' ὅτι τὰ μὲν ἄμισχα, καθάπερ τὰ τῆς σκίλλης καὶ τοῦ βολβοῦ, τὰ δ' ἔχοντα μίσχον. καὶ τὰ μὲν μακρόν, οἷον ἡ ἄμπελος καὶ ὁ κιττός, τὰ δὲ βραχὺν καὶ οἷον ἐμπεφυκότα, καθάπερ ἐλάα καὶ οὐχ ὥσπερ ἐπὶ τῆς πλατάνου καὶ ἀμπέλου προσηρτημένον. διαφορὰ δὲ καὶ τὸ μὴ ἐκ τῶν αὐτῶν εἶναι τὴν πρόσφυσιν, ἀλλὰ τοῖς μὲν πλείστοις ἐκ τῶν κλάδων τοῖς δὲ καὶ ἐκ τῶν ἀκρεμόνων, τῆς δρυὸς δὲ καὶ ἐκ τοῦ στελέχους, τῶν δὲ λαχανωδῶν τοῖς πολλοῖς εὐθύς ἐκ τῆς ρίζης, οἷον κρομύου σκόρδου κιχορίου, ἔτι δὲ ἀσφοδέλου σκίλλης βολβοῦ σισυριγγίου καὶ ὅλως τῶν βολβωδῶν· καὶ τούτων δὲ οὐχ ἡ πρώτη μόνον ἔκφυσις ἀλλὰ καὶ ὅλος ὁ καυλὸς ἄφυλλον. ἐνίων δ' ὅταν γένηται, φύλλα εἰκός, οἷον θριδακίνης ὠκίμου σελίνου καὶ τῶν σιτηρῶν ὁμοίως. ἔχει δ' ἔνια τούτων καὶ τὸν καυλὸν εἴτ' ἀκανθίζοντα, ὡς ἡ θριδακίνη καὶ τὰ φυλλάκανθα πάντα καὶ τῶν θαμνωδῶν δὲ καὶ ἔτι μᾶλλον, οἷον βάτος παλίουρος.

[8] Κοινὴ δὲ διαφορὰ πάντων ὁμοίως δένδρων καὶ τῶν ἄλλων ὅτι τὰ μὲν πολύφυλλα τὰ δ' ὀλιγόφυλλα. ὡς δ' ἐπὶ τὸ πᾶν τὰ πλατύφυλλα ταξίφυλλα, καθάπερ μύρρινος, τὰ δ' ἄτακτα καὶ ὡς ἔτυχε, καθάπερ σχεδὸν τὰ πλείστα τῶν ἄλλων [ἦν]. ἴδιον δὲ ἐπὶ τῶν λαχανωδῶν, οἷον κρομύου γητείου, τὸ κοιλόφυλλον.

Ἀπλῶς δ' αἱ διαφοραὶ τῶν φύλλων ἢ μεγέθει ἢ πλήθει ἢ σχήματι ἢ πλατύτητι ἢ στενότητι ἢ κοιλότητι ἢ τραχύτητι ἢ λειότητι καὶ τῷ παρακανθίζειν ἢ μὴ. ἔτι δὲ κατὰ τὴν πρόσφυσιν ὅθεν ἢ δι' οὗ· τὸ μὲν ὅθεν, ἀπὸ ρίζης ἢ κλάδου ἢ καυλοῦ ἢ ἀκρεμόνος· τὸ δὲ δι' οὗ, ἢ διὰ μίσχου ἢ δι' αὐτοῦ καὶ εἰ δὴ πολλὰ ἐκ τοῦ αὐτοῦ. καὶ ἔνια καρποφόρα, μεταξὺ περιειληφότα τὸν καρπὸν, ὥσπερ ἡ Ἀλεξανδρεία δάφνη ἐπιφυλλόκαρπος.

Αἱ μὲν οὖν διαφοραὶ τῶν φύλλων κοινοτέρως πᾶσαι εἴρηνται καὶ σχεδὸν εἰσιν ἐν τούτοις.

(Σύγκειται δὲ τὰ μὲν ἐξ ἰνὸς καὶ φλοιοῦ καὶ σαρκός, οἷον τὰ τῆς συκῆς καὶ τῆς ἀμπέλου, τὰ δὲ ὥσπερ ἐξ ἰνὸς μόνον, οἷον τοῦ καλάμου καὶ σίτου.

[9] τὸ δὲ ὑγρὸν ἀπάντων κοινόν· ἅπασι γὰρ ἐνυπάρχει καὶ τούτοις καὶ τοῖς

ἄλλοις τοῖς ἐπετείοις [μίσχος ἄνθος καρπὸς εἴ τι ἄλλο]· μᾶλλον δὲ καὶ τοῖς μὴ ἐπετείοις· οὐδὲν γὰρ ἄνευ τούτου. δοκεῖ δὲ καὶ τῶν μίσχων τὰ μὲν ἐξ ἰνῶν μόνον συγκεῖσθαι, καθάπερ τὰ τοῦ σίτου καὶ τοῦ καλάμου, τὰ δ' ἐκ τῶν αὐτῶν, ὥσπερ οἱ καυλοί.

[10] Τῶν δ' ἄνθων τὰ μὲν ἐκ φλοιοῦ καὶ φλεβὸς καὶ σαρκὸς, <τὰ δ' ἐκ σαρκὸς> μόνον, οἷον τὰ ἐν μέσῳ τῶν ἄρων.

Ὅμοιως δὲ καὶ ἐπὶ τῶν καρπῶν· οἱ μὲν γὰρ ἐκ σαρκὸς καὶ ἰνός, οἱ δὲ ἐκ σαρκὸς μόνον, οἱ δὲ καὶ ἐκ δέρματος σύγκεινται· τὸ δὲ ὕγρον ἀκολουθεῖ καὶ τούτοις. ἐκ σαρκὸς μὲν καὶ ἰνός ὁ τῶν κοκκυμήλων καὶ σικύων, ἐξ ἰνὸς δὲ καὶ δέρματος ὁ τῶν συκαμίνων καὶ τῆς ρόας. ἄλλοι δὲ κατ' ἄλλον τρόπον μεμερισμένοι. πάντων δὲ ὡς εἰπεῖν τὸ μὲν ἔξω φλοιὸς τὸ δ' ἐντὸς σὰρξ τῶν δὲ καὶ πυρήν.)

[11.1] Ἐσχατον δ' ἐν ἅπασιν τὸ σπέρμα. τοῦτο δὲ ἔχον ἐν ἑαυτῷ σύμφυτον ὕγρον καὶ θερμόν, ὃν ἐκλιπόντων ἄγονα, καθάπερ τὰ ὠά. καὶ τῶν μὲν εὐθὺς τὸ σπέρμα μετὰ τὸ περιέχον, οἷον φοῖνικος καρύου ἀμυγδάλης, πλείω δὲ τούτων τὰ ἐμπεριέχοντα, ὡς τὰ τοῦ φοῖνικος. τῶν δὲ μεταξὺ σὰρξ καὶ πυρήν, ὥσπερ ἐλάας καὶ κοκκυμηλέας καὶ ἐτέρων. ἔνια δὲ καὶ ἐν λοβῷ, τὰ δ' ἐν ὕμένι, τὰ δ' ἐν ἀγγείῳ, τὰ δὲ καὶ γυμνόσπερμα τελείως.

[2] Ἐν λοβῷ μὲν οὐ μόνον τὰ ἐπέτεια, καθάπερ τὰ χεδροπὰ καὶ ἕτερα πλείω τῶν ἀγρίων, ἀλλὰ καὶ τῶν δένδρων ἔνια, καθάπερ ἢ τε κερωνία, ἣν τινες καλοῦσιν συκὴν Αἰγυπτίαν, καὶ ἢ κερκὶς καὶ ἢ κολοιτία περὶ Λιπάραν· ἐν ὕμένι δ' ἔνια τῶν ἐπετείων, ὥσπερ ὁ πυρὸς καὶ ὁ κέγχρος· ὡσαύτως δὲ καὶ ἐναγγειοσπέρματα καὶ γυμνοσπέρματα. ἐναγγειοσπέρματα μὲν οἷον ἢ τε μήκων καὶ ὅσα μηκωνικά· τὸ γὰρ σήσαμον ἰδιωτέρως· γυμνοσπέρματα δὲ τῶν τε λαχάνων πολλά, καθάπερ ἄνηθον κορίαννον ἄνηησον κύμινον μάραθρον καὶ [3] ἕτερα πλείω. τῶν δὲ δένδρων οὐδὲν γυμνόσπερμον ἀλλ' ἢ σαρκί περιεχόμενον ἢ κελύφεσιν, τὰ μὲν δερματικοῖς, ὥσπερ ἢ βάλανος καὶ τὸ Εὐβοϊκόν, τὰ δὲ ξυλῳδεςιν, ὥσπερ ἢ ἀμυγδάλη καὶ τὸ κάρυον. οὐδὲν δὲ ἐναγγειόσπερμον, εἰ μὴ τις τὸν κῶνον ἀγγεῖον θήσει διὰ τὸ χωρίζεσθαι τῶν καρπῶν.

Αὐτὰ δὲ τὰ σπέρματα τῶν μὲν εὐθὺς σαρκώδη, καθάπερ ὅσα καρυηρὰ καὶ βαλανηρά· τῶν δὲ ἐν πυρήνι τὸ σαρκῶδες ἔχεται, καθάπερ ἐλάας καὶ δαφνίδος καὶ ἄλλων. τῶν δ' ἐμπύρηνα μόνον ἢ πυρηνώδη γε καὶ ὥσπερ ξηρά, καθάπερ τὰ κνηκώδη καὶ κεγχραμιδώδη καὶ πολλὰ τῶν λαχανηρῶν. ἐμφανέστατα δὲ τὰ τοῦ φοῖνικος· οὐδὲ γὰρ κοιλότητα ἔχει τοῦτο οὐδεμίαν

ἀλλ' ὄλον ξηρόν· οὐ μὴν ἀλλ' ὑγρότης δὴ τις καὶ θερμότης ὑπάρχει δῆλον ὅτι καὶ τούτῳ, καθάπερ εἵπομεν.

[4] Διαφέρουσι δὲ καὶ τῷ τὰ μὲν ἄθρόα μετ' ἀλλήλων εἶναι, τὰ δὲ διεστῶτα καὶ στοιχηδόν, ὥσπερ τὰ τῆς κολοκύντης καὶ σικύας καὶ τῶν δένδρων, ὡς Περσικῆς μηλέας. καὶ τῶν ἄθρόων τὰ μὲν ἐνί τινι περιέχεσθαι, καθάπερ τὰ τῆς ῥόας καὶ τῆς ἀπίου καὶ μηλέας καὶ τῆς ἀμπέλου καὶ συκῆς· τὰ δὲ μετ' ἀλλήλων μὲν εἶναι, μὴ περιέχεσθαι δὲ ὑφ' ἐνός, ὥσπερ τὰ σταχυηρὰ τῶν ἐπετείων, εἰ μὴ τις θείῃ τὸν στάχυν ὡς περιέχον· οὕτω δ' ἔσται καὶ ὁ βότρυς καὶ τᾶλλα τὰ βοτρυνώδη καὶ ὅσα δὴ φέρει δι' εὐβοσίαν καὶ χώρας ἀρετὴν ἄθρόους τοὺς καρπούς, ὥσπερ ἐν Συρίᾳ φασὶ καὶ ἄλλοι τὰς ἐλάας.

[5] Ἀλλὰ καὶ αὕτη δοκεῖ τις εἶναι διαφορὰ τὸ τὰ μὲν ἀφ' ἐνός μίσχου καὶ μιᾶς προσφύσεως ἄθρόα γίνεσθαι, καθάπερ ἐπὶ τε τῶν βοτρυνηρῶν καὶ σταχυηρῶν εἴρηται μὴ περιεχόμενα κοινῷ τινι γίνεσθαι· τὰ δὲ μὴ γίνεσθαι. ἐπεὶ καθ' ἕκαστόν γε λαμβάνοντι τῶν σπερμάτων ἢ τῶν περιεχόντων ἰδίαν ἀρχὴν ἔχει τῆς προσφύσεως, οἷον ἢ τε ῥᾶξ καὶ ἢ ῥόα καὶ πάλιν ὁ πυρὸς καὶ ἢ κριθή· ἡκιστα δ' ἂν δόξειεν τὰ τῶν μήλων καὶ τὰ τῶν ἀπίων, ὅτι συμψαύει τε καὶ περιεῖληπται καθάπερ ὑμένι τινὶ δερματικῷ περὶ ὃν τὸ περικάρπιον· [6] ἀλλ' ὅμως καὶ τούτων ἕκαστον ἰδίαν ἀρχὴν ἔχει καὶ φύσιν· φανερώτατα δὲ τῷ κεχώρισθαι τὰ τῆς ῥόας· ὁ γὰρ πυρὴν ἐκάστω προσπέφυκεν, οὐχ ὥσπερ τῶν συκῶν ἄδηλα διὰ τὴν ὑγρότητα. καὶ γὰρ τούτῳ ἔχουσι διαφορὰν καίπερ ἀμφοτέρα περιεχόμενα σαρκῶδει τινὶ καὶ τῷ τοῦτο περιεληφότει μετὰ τῶν ἄλλων· τὰ μὲν γὰρ περὶ ἕκαστον ἔχει πυρῆνα τὸ σαρκῶδες τοῦτο τὸ ὑγρόν, αἱ δὲ κεγχραμίδες ὥσπερ κοινόν τι πᾶσαι, καθάπερ καὶ τὸ γίγαρτον καὶ ὅσα τὸν αὐτὸν ἔχει τρόπον. ἀλλὰ τὰς μὲν τοιαύτας διαφορὰς τάχ' ἂν τις λάβοι πλείους· ὧν δεῖ τὰς κυριωτάτας καὶ μάλιστα τῆς φύσεως μὴ ἀγνοεῖν.

[12.1] Αἱ δὲ κατὰ τοὺς χυλοὺς καὶ τὰ σχήματα καὶ τὰς ὅλας μορφὰς σχεδὸν φανεραὶ πᾶσιν, ὥστε μὴ δεῖσθαι λόγου· πλὴν τοσοῦτόν γ' ὅτι σχῆμα οὐδὲν περικάρπιον εὐθύγραμμον οὐδὲ γωνίας ἔχει. τῶν δὲ χυλῶν οἱ μὲν εἰσιν οἰνώδεις, ὥσπερ ἀμπέλου συκαμίνου μύρτου· οἱ δ' ἐλαώδεις, ὥσπερ ἐλάας δάφνης καρύας ἀμυγδαλῆς πεύκης πίτυος ἐλάτης· οἱ δὲ μελιτώδεις, οἷον σύκου φοίνικος διοςβαλάνου· οἱ δὲ δριμεῖς, οἷον ὀριγάνου θύμβρας καρδάμου νάπτου· οἱ δὲ πικροί, ὥσπερ ἀψινθίου κενταυρίου. διαφέρουσι δὲ καὶ ταῖς εὐωδίαις, οἷον ἀννήσου κεδρίδος· ἐνίων δὲ ὑδαρεῖς ἂν δόξαιεν, οἷον οἱ τῶν κοκκυμηλέων· οἱ δὲ ὀξεῖς, ὥσπερ ῥοῶν καὶ ἐνίων μήλων. ἀπάντων δὲ οἰνώδεις καὶ τοὺς ἐν τούτῳ τῷ γένει θετέον· ἄλλοι δὲ ἐν ἄλλοις εἶδεσιν ὑπὲρ

ὧν ἀπάντων ἀκριβέστερον ἐν τοῖς περὶ χυλῶν ρητέον, αὐτάς τε τὰς ιδέας διαριθμουμένους ὁπόσαι καὶ τὰς πρὸς ἀλλήλους διαφορὰς καὶ τίς ἡ ἐκάστου φύσις καὶ δύναμις.

[2] Ἔχει δὲ καὶ ἡ τῶν δένδρων αὐτῶν ὑγρότης, ὥσπερ ἐλέχθη, διάφορα εἶδη· ἡ μὲν γάρ ἐστιν ὀπώδης, ὥσπερ ἡ τῆς συκῆς καὶ τῆς μήκωνος· ἡ δὲ πιττώδης, οἷον ἐλάτης πεύκης τῶν κωνοφόρων· ἄλλη δ' ὕδαρής, οἷον ἀμπέλου ἀπίου μηλέας, καὶ τῶν λαχανωδῶν δέ, οἷον σικύου κολοκύντης θριδακίνης· αἱ δὲ [ἤδη] δριμύτητά τινα ἔχουσι, καθάπερ ἡ τοῦ θύμου καὶ θύμβρας· αἱ δὲ καὶ εὐωδία, ὥσπερ αἱ τοῦ σελίνου ἀνήθου μαράθου καὶ τῶν τοιούτων. ὥς δ' ἀπλῶς εἰπεῖν ἅπασαι κατὰ τὴν ἰδίαν φύσιν ἐκάστου δένδρου καὶ ὥς καθ' ὅλου εἰπεῖν φυτοῦ· πᾶν γὰρ ἔχει κρᾶσίν τινα καὶ μίξιν ἰδίαν, ἥπερ οἰκεία δῆλον ὅτι τυγχάνει τοῖς ὑποκειμένοις καρποῖς· ὧν τοῖς πλείστοις συνεμφαίνεται τις ὁμοιότης οὐκ ἀκριβῆς οὐδὲ σαφής· ἀλλ' ἐν τοῖς περικαρπίοις· διὸ μᾶλλον κατεργασίαν λαμβάνει καὶ πέψιν καθαρὰν καὶ εἰλικρινῇ ἡ τοῦ χυλοῦ φύσις· δεῖ γὰρ ὥσπερ τὸ μὲν ὕλην ὑπολαβεῖν τὸ δὲ εἶδος καὶ μορφήν.

[3] Ἔχει δὲ αὐτὰ τὰ σπέρματα καὶ οἱ χιτῶνες οἱ περὶ αὐτὰ διαφορὰν τῶν χυλῶν. ὥς δ' ἀπλῶς εἰπεῖν ἅπαντα τὰ μόρια τῶν δένδρων καὶ φυτῶν, οἷον ρίζα καυλὸς ἀκρεμῶν φύλλον καρπός, ἔχει τινὰ οἰκειότητα πρὸς τὴν ὅλην φύσιν, εἰ καὶ παραλλάττει κατὰ τε τὰς ὁσμάς καὶ τοὺς χυλοὺς, ὥς τὰ μὲν εὖοσμα καὶ εὐώδη τὰ δ' ἄοσμα καὶ ἄχυλα παντελῶς εἶναι τῶν τοῦ αὐτοῦ μορίων.

[4] Ἐνίων γὰρ εὖοσμα τὰ ἄνθη μᾶλλον ἢ τὰ φύλλα, τῶν δὲ ἀνάπαλιν τὰ φύλλα μᾶλλον καὶ οἱ κλῶνες, ὥσπερ τῶν στεφανωματικῶν· τῶν δὲ οἱ καρποὶ· τῶν δ' οὐδέτερον· ἐνίων δ' αἱ ρίζαι· τῶν δὲ τι μέρος. ὁμοίως δὲ καὶ κατὰ τοὺς χυλοὺς· τὰ μὲν γὰρ βρωτὰ τὰ δ' ἄβρωτα τυγχάνει καὶ ἐν φύλλοις καὶ περικαρπίοις. ἰδιώτατον δὲ τὸ ἐπὶ τῆς φυλίας· ταύτης γὰρ τὰ μὲν φύλλα γλυκέα καὶ πολλὰ τῶν ζώων ἐσθίει, ὁ δὲ καρπὸς οὐδενὶ βρωτός· ἐπεὶ τό γε ἀνάπαλιν οὐδὲν θαυμαστόν, ὥστε τὰ μὲν φύλλα μὴ ἐσθίεσθαι τοὺς δὲ καρποὺς οὐ μόνον ὑφ' ἡμῶν ἀλλὰ καὶ ὑπὸ τῶν ἄλλων ζώων. ἀλλὰ καὶ περὶ τούτου καὶ τῶν ἄλλων τῶν τοιούτων ὕστερον πειρατέον θεωρεῖν τὰς αἰτίας.

[13.1] Νῦν δὲ τοσοῦτον ἔστω δῆλον, ὅτι κατὰ πάντα τὰ μέρη πλείους εἰσι διαφοραὶ πολλαχῶς· ἐπεὶ καὶ τῶν ἀνθῶν τὰ μὲν ἐστὶ χνοώδη, καθάπερ τὸ τῆς ἀμπέλου καὶ συκαμίνου καὶ τοῦ κιττοῦ· τὰ δὲ φυλλώδη, καθάπερ ἀμυγδαλῆς μηλέας ἀπίου κοκκυμηλέας. καὶ τὰ μὲν μέγεθος ἔχει, τὸ δὲ τῆς ἐλάας φυλλῶδες ὃν ἀμέγεθες. ὁμοίως δὲ καὶ ἐν τοῖς ἐπετείοις καὶ ποιωδέσι τὰ μὲν φυλλώδη τὰ δὲ χνοώδη. πάντων δὲ τὰ μὲν δίχροα τὰ δὲ μονόχροα. τὰ μὲν τῶν

δένδρων τὰ γε πολλὰ μονόχροα καὶ λευκανθῇ· μόνον γὰρ ὡς εἶπεῖν τὸ τῆς
ρόας φοινικοῦν καὶ ἀμυγδαλῶν τινων ὑπέρυθρον· ἄλλου δὲ οὐδενὸς τῶν
ἡμέρων οὔτε ἀνθῶδες οὔτε δίχρουν, ἀλλ' εἴ τινος τῶν ἀγρίων, οἷον τὸ τῆς
ἐλάτης· κρόκινον γὰρ τὸ ταύτης ἄνθος· καὶ ὅσα δὴ φασιν ἐν τῇ ἔξω θαλάττῃ
ρόδων ἔχειν τὴν χροάν.

[2] Ἐν δὲ τοῖς ἐπετείοις σχεδὸν τὰ γε πλείω τοιαῦτα καὶ δίχροα καὶ διανθῇ.
λέγω δὲ διανθὲς ὅτι ἕτερον ἄνθος ἐν τῷ ἄνθει ἔχει κατὰ μέσον, ὥσπερ τὸ
ρόδον καὶ τὸ κρίνον καὶ τὸ ἶον τὸ μέλαν. ἔνια δὲ καὶ μονόφυλλα φύεται
διαγραφὴν ἔχοντα μόνον τῶν πλειόνων, ὥσπερ τὸ τῆς ἰασιώνης· οὐ γὰρ
κεχώριστα ταύτης ἐν τῷ ἄνθει τὸ φύλλον ἕκαστον· οὐδὲ δὴ τοῦ λειρίου τὸ
κάτω μέρος, ἀλλὰ ἐκ τῶν ἄκρων ἀποφύσεις γωνιώδεις. σχεδὸν δὲ καὶ τὸ τῆς
ἐλάας τοιοῦτόν ἐστιν.

[3] Διαφέρει δὲ καὶ κατὰ τὴν ἔκφυσιν καὶ θέσιν· τὰ μὲν γὰρ ἔχει περὶ αὐτὸν
τὸν καρπὸν, οἷον ἄμπελος ἐλάα· ἥς καὶ ἀποπίπτοντα διατετρημένα φαίνεται,
καὶ τοῦτο σημεῖον λαμβάνουσιν εἰ καλῶς ἀπήνθηκεν· ἐὰν γὰρ συγκαυθῇ ἢ
βρεχθῇ, συναποβάλλει τὸν καρπὸν καὶ οὐ τετρημένον γίγνεται· σχεδὸν δὲ καὶ
τὰ πολλὰ τῶν «ἀνθῶν» ἐν μέσῳ τὸ περικάρπιον ἔχει, τάχα δὲ καὶ ἐπ' αὐτοῦ
τοῦ περικαρπίου, καθάπερ ρόα μελέα ἄπιος κοκκυμηλέα μύρρινος, καὶ τῶν γε
φρυγανικῶν ρόδωνία καὶ τὰ πολλὰ τῶν στεφανωτικῶν· κάτω γὰρ ὑπὸ τὸ
ἄνθος ἔχει τὰ σπέρματα· φανερώτατον δὲ ἐπὶ τοῦ ρόδου διὰ τὸν ὄγκον. ἔνια
δὲ καὶ ἐπ' αὐτῶν τῶν σπερμάτων, ὥσπερ ὁ ἄκανος καὶ ὁ κνήκος καὶ πάντα τὰ
ἀκανώδη· καθ' ἕκαστον γὰρ ἔχει τὸ ἄνθος. ὁμοίως δὲ καὶ τῶν ποιωδῶν ἔνια,
καθάπερ τὸ ἄνθεμον· ἐν δὲ τοῖς λαχανηροῖς ὁ τε σίκυος καὶ ἡ κολοκύνθη καὶ ἡ
σικύα· πάντα γὰρ ἐπὶ τῶν καρπῶν ἔχει καὶ προσανυξανομένων ἐπιμένει τὰ
ἄνθη πολὺν χρόνον.

[4] Ἄλλα δὲ ἰδιωτέρως, οἷον ὁ κιττὸς καὶ ἡ συκάμιнос· ἐν αὐτοῖς μὲν γὰρ
ἔχει τοῖς ὅλοις περικαρπίοις, οὐ μὴν οὔτε ἐπ' ἄκροις οὔτ' ἐπὶ περιειληφόσι
καθ' ἕκαστον, ἀλλ' ἐν τοῖς ἀνά μέσον· εἰ μὴ ἄρα οὐ σύνδηλα διὰ τὸ χνοῶδες.

Ἔστι δὲ καὶ ἄγονα τῶν ἀνθῶν ἔνια, καθάπερ ἐπὶ τῶν σικύων ἃ ἐκ τῶν
ἄκρων φύεται τοῦ κλήματος, δι' ὃ καὶ ἀφαιροῦσιν αὐτά· κωλύει γὰρ τὴν τοῦ
σικύου βλάστησιν. φασὶ δὲ καὶ τῆς μηλέας τῆς Μηδικῆς ὅσα μὲν ἔχει τῶν
ἀνθῶν ὥσπερ ἡλακάτην τινὰ πεφυκυῖαν ἐκ μέσου ταῦτ' εἶναι γόνιμα, ὅσα δὲ
μὴ ἔχει ταῦτ' ἄγονα. εἰ δὲ καὶ ἐπ' ἄλλου τινὸς ταῦτα συμβαίνει τῶν
ἀνθοφόρων ὥστε ἄγονον ἄνθος φύειν εἴτε κεχωρισμένον εἴτε μὴ, σκεπτέον.
ἐπεὶ γένη γε ἔνια καὶ ἀμπέλου καὶ ρόας ἀδυνατεῖ τελεοκαρπεῖν, ἀλλὰ μέχρι

τοῦ ἄνθους ἢ γένεσις.

[5] (Γίνεται δὲ καὶ τό γε τῆς ρόας ἄνθος πολὺ καὶ πυκνὸν καὶ ὅλως ὁ ὄγκος πλατὺς ὥσπερ ὁ τῶν ρόδων· κάτωθεν δ' ἑτεροῖος· οἷος διώτος μικρὸς ὥσπερ ἐκτετραμμένος ὁ κύτινος ἔχων τὰ χεῖλη μυχῶδη.)

Φασι δὲ τινες καὶ τῶν ὁμογενῶν τὰ μὲν ἀνθεῖν τὰ δ' οὐ, καθάπερ τῶν φοινίκων τὸν μὲν ἄρρενα ἀνθεῖν τὸν δὲ θῆλυν οὐκ ἀνθεῖν ἀλλ' εὐθὺ προφαίνειν τὸν καρπὸν.

Τὰ μὲν οὖν τῷ γένει ταῦτα τοιαύτην τὴν διαφορὰν ἔχει, καθάπερ ὅλως ὅσα μὴ δύναται τελεοκαρπεῖν. ἢ δὲ τοῦ ἄνθους φύσις ὅτι πλείους ἔχει διαφορὰς φανερὸν ἐκ τῶν προειρημένων.

[14.1] Διαφέρει δὲ τὰ δένδρα καὶ τοῖς τοιούτοις κατὰ τὴν καρποτοκίαν· τὰ μὲν γὰρ ἐκ τῶν νέων βλαστῶν φέρει τὰ δ' ἐκ τῶν ἔνων τὰ δ' ἐξ ἀμφοτέρων. ἐκ μὲν τῶν νέων συκῇ ἄμπελος· ἐκ δὲ τῶν ἔνων ἐλάα ρόα μηλέα ἀμυγδαλῇ ἄπιος μύρρινος καὶ σχεδὸν τὰ τοιαῦτα πάντα· ἐκ δὲ τῶν νέων ἐὰν ἄρα τι συμβῇ κυῆσαι καὶ ἀνθῆσαι (γίνεται γὰρ καὶ ταῦτ' ἐνίοις, ὥσπερ καὶ τῷ μυρρίνῳ καὶ μάλισθ' ὥς εἰπεῖν περὶ τὰς βλαστήσεις τὰς μετ' Ἀρκτοῦρον) οὐ δύναται τελεοῦν ἀλλ' ἡμιγενῇ φθείρεται· ἐξ ἀμφοτέρων δὲ καὶ τῶν ἔνων καὶ τῶν νέων εἰ τινες ἄρα μηλέαι τῶν διφώρων ἢ εἰ τι ἄλλο κάρπιμον· ἔτι δὲ ὁ ὄλυνθος ἐκπέττων καὶ σῦκα φέρων ἐκ τῶν νέων.

[2] Ἰδιωτάτη δὲ ἡ ἐκ τοῦ στελέχους ἔκφυσις, ὥσπερ τῆς ἐν Αἰγύπτῳ συκαμίνου· ταύτην γὰρ φασι φέρειν ἐκ τοῦ στελέχους· οἱ δὲ ταύτη τε καὶ ἐκ τῶν ἀκρεμόνων, ὥσπερ τὴν κερωνίαν· αὕτη γὰρ καὶ ἐκ τούτων φέρει πλὴν οὐ πολύν· καλοῦσι δὲ κερωνίαν ἀφ' ἧς τὰ σῦκα τὰ Αἰγύπτια καλούμενα. ἔστι δὲ καὶ τὰ μὲν ἀκρόκαρπα τῶν δένδρων καὶ ὅλως τῶν φυτῶν τὰ δὲ πλαγιόκαρπα τὰ δ' ἀμφοτέρως. πλείω δ' ἀκρόκαρπα τῶν ἄλλων ἢ τῶν δένδρων, οἷον τῶν τε σιτηρῶν τὰ σταχυώδη καὶ τῶν θαμνωδῶν ἐρείκη καὶ σπειραία καὶ ἄγνος καὶ ἄλλ' ἅττα καὶ τῶν λαχανωδῶν τὰ κεφαλόρριζα. ἐξ ἀμφοτέρων δὲ καὶ τῶν δένδρων ἔνια καὶ τῶν λαχανωδῶν, οἷον βλίτον ἀδράφαξυς ράφανος· ἐπεὶ καὶ ἐλάα ποιεῖ πῶς τοῦτο, καὶ φασιν ὅταν ἄκρον ἐνέγκῃ σημεῖον εὐφορίας εἶναι. ἀκρόκαρπος δὲ πῶς καὶ ὁ φοῖνιξ· πλὴν τοῦτό γε καὶ ἀκρόφυλλον καὶ ἀκρόβλαστον· ὅλως γὰρ ἐν τῷ ἄνω πᾶν τὸ ζωτικόν. τὰς μὲν οὖν κατὰ τὰ μέρη διαφορὰς πειρατέον ἐκ τούτων θεωρεῖν.

[3] Αἱ δὲ τοιαῦται τῆς ὅλης οὐσίας φαίνονται· δῆλον ὅτι τὰ μὲν ἡμερα τὰ δ' ἄγρια· καὶ τὰ μὲν κάρπιμα τὰ δ' ἄκαρπα· καὶ ἀείφυλλα καὶ φυλλοβόλα, καθάπερ ἐλέχθη, τὰ δ' ὅλως ἄφυλλα· καὶ τὰ μὲν ἀνθητικά τὰ δ' ἀνανθη· καὶ

πρωΐβλαστῇ δὲ καὶ πρωΐκαρπα τὰ δὲ ὀψιβλαστῇ καὶ ὀψίκαρπα· ὡσαύτως δὲ καὶ ὅσα παραπλήσια τούτοις. καὶ πως τὰ γε τοιαῦτα ἐν τοῖς μέρεσιν ἢ οὐκ ἄνευ τῶν μερῶν ἐστίν. ἀλλ' ἐκείνη ιδιωτάτη καὶ τροπὸν τινα μεγίστη διάστασις, ἥπερ καὶ ἐπὶ τῶν ζώων, ὅτι τὰ μὲν ἔνυδρα τὰ δὲ χερσαῖα· καὶ γὰρ τῶν φυτῶν ἔστι τι τοιοῦτον γένος ὃ οὐ δύναται φύεσθαι (μὴ) ἐν ὑγρῷ· τὰ δὲ φύεται μὲν, οὐχ ὅμοια δὲ ἀλλὰ χεῖρω. πάντων δὲ τῶν δένδρων ὡς ἀπλῶς εἰπεῖν καὶ τῶν φυτῶν εἶδη πλείω τυγχάνει καθ' ἕκαστον [4] γένος· σχεδὸν γὰρ οὐδέν ἐστιν ἀπλοῦν· ἀλλ' ὅσα μὲν ἡμερα καὶ ἄγρια λέγεται ταύτην ἐμφανεστάτην καὶ μεγίστην ἔχει διαφοράν, οἷον συκὴ ἐρινεός, ἐλάα κότινος, ἄπιος ἀγράς· ὅσα δ' ἐν ἐκατέρῳ τούτων τοῖς καρποῖς τε καὶ φύλλοις καὶ ταῖς ἄλλαις μορφαῖς τε καὶ τοῖς μορίοις. ἀλλὰ τῶν μὲν ἀγρίων ἀνώνυμα τὰ πλεῖστα καὶ ἔμπειροι ὀλίγοι· τῶν δὲ ἡμέρων καὶ ὀνομασμένα τὰ πλείω καὶ ἡ αἰσθησις κοινοτέρα· λέγω δ' οἷον ἀμπέλου συκῆς ρόας μηλέας ἀπίου δάφνης μυρρίνης τῶν ἄλλων· ἡ γὰρ χρῆσις οὕσα κοινὴ συνθεωρεῖν ποιεῖ τὰς διαφοράς.

[5] Ἴδιον δὲ καὶ τοῦτ' ἐφ' ἐκατέρων· τὰ μὲν γὰρ ἄγρια τῷ ἄρρενι καὶ τῷ θήλει ἢ μόνοις ἢ μάλιστα διαιροῦσι, τὰ δὲ ἡμερα πλείοσιν ιδέαις. ἔστι δὲ τῶν μὲν ῥᾶον λαβεῖν καὶ διαριθμῆσαι τὰ εἶδη, τῶν δὲ χαλεπώτερον διὰ τὴν πολυχοίαν.

Ἀλλὰ δὴ τὰς μὲν τῶν μορίων διαφορὰς καὶ τῶν ἄλλων οὐσιῶν ἐκ τούτων πεπρατέον θεωρεῖν. περὶ δὲ τῶν γενέσεων μετὰ ταῦτα λεκτέον· τοῦτο γὰρ ὥσπερ ἐφεξῆς τοῖς εἰρημένοις ἐστίν.

Liber II

[1] Αἱ γενέσεις τῶν δένδρων καὶ ὅλως τῶν φυτῶν ἢ αὐτόμαται ἢ ἀπὸ σπέρματος ἢ ἀπὸ ρίζης ἢ ἀπὸ παρασπάδος ἢ ἀπὸ ἀκρεμόνος ἢ ἀπὸ κλωνὸς ἢ ἀπ' αὐτοῦ τοῦ στελέχους εἰσίν, ἢ ἔτι τοῦ ξύλου κατακοπέντος εἰς μικρά· καὶ γὰρ οὕτως ἓνα φύεται. τούτων δὲ ἡ μὲν αὐτόματος πρώτη τις, αἱ δὲ ἀπὸ σπέρματος καὶ ρίζης φυσικώταται δόξαιεν ἄν· ὥσπερ γὰρ αὐτόμαται καὶ αὐταί· δι' ὃ καὶ τοῖς ἀγρίοις ὑπάρχουσιν· αἱ δὲ ἄλλαι τέχνης ἢ δὴ προαιρέσεως.

[2] Ἄπαντα δὲ βλαστάνει κατὰ τινὰ τῶν τρόπων τούτων, τὰ δὲ πολλὰ κατὰ πλείους· ἐλάα μὲν γὰρ πάντως φύεται πλὴν ἀπὸ τοῦ κλωνός· οὐ γὰρ δύναται καταπηγνυμένη, καθάπερ ἡ συκὴ τῆς κράδης καὶ ἡ ρόα τῆς ράβδου. καίτοι φασὶ γέ τινες ἤδη καὶ χάρακος παγείσης καὶ πρὸς τὸν κιττὸν συμβιῶσαι καὶ γενέσθαι δένδρον· ἀλλὰ σπάνιόν τι τὸ τοιοῦτον· θάτερα δὲ τὰ πολλὰ τῆς φύσεως. συκὴ δὲ τοὺς μὲν ἄλλους τρόπους φύεται πάντας, ἀπὸ δὲ τῶν πρέμνων καὶ τῶν ξύλων οὐ φύεται· μηλέα δὲ καὶ ἄπιος καὶ ἀπὸ τῶν ἀκρεμόνων σπανίως. οὐ μὴν ἀλλὰ τὰ γε πολλὰ ἢ πάνθ' ὥς εἰπεῖν ἐνδέχεσθαι δοκεῖ καὶ ἀπὸ τούτων, ἐὰν λειοὶ καὶ νέοι καὶ εὐανξεῖς ᾖσιν. ἀλλὰ φυσικώτεραί πως ἐκεῖναι· τὸ δὲ ἐνδεχόμενον ὥς δυνατόν ληπτέον.

[3] Ὅλως γὰρ ὀλίγα τὰ ἀπὸ τῶν ἄνω μᾶλλον βλαστάνοντα καὶ γεννώμενα, καθάπερ ἄμπελος ἀπὸ τῶν κλημάτων· αὕτη γὰρ οὐκ ἀπὸ τῆς πρώρας ἀλλ' ἀπὸ τοῦ κλήματος φύεται, καὶ εἰ δὴ τι τοιοῦτον ἕτερον ἢ δένδρον ἢ φρυγανῶδες, ὥσπερ δοκεῖ τό τε πήγανον καὶ ἡ ἰωνία καὶ τὸ σισύμβριον καὶ ὁ ἔρφυλλος καὶ τὸ ἐλένιον. κοινοτάτη μὲν οὖν ἐστὶ πᾶσιν ἢ τε ἀπὸ τῆς παρασπάδος καὶ ἀπὸ σπέρματος. ἅπαντα γὰρ ὅσα ἔχει σπέρματα καὶ ἀπὸ σπέρματος γίνεται· ἀπὸ δὲ παρασπάδος καὶ τὴν δάφνην φασίν, ἐάν τις τὰ ἔρνη παρελὼν φυτεύσῃ. δεῖ δὲ ὑπόρριζον εἶναι μάλιστα γε τὸ παρασπώμενον ἢ ὑπόπρεμνον. οὐ μὴν ἀλλὰ καὶ ἄνευ τούτου θέλει βλαστάνειν καὶ ρόα καὶ μηλέα ἑαρινή· βλαστάνει δὲ καὶ ἀμυγδαλὴ φυτευομένη.

[4] κατὰ πλείστους δὲ τρόπους ὥς εἰπεῖν ἡ ἐλάα βλαστάνει· καὶ γὰρ ἀπὸ τοῦ στελέχους καὶ ἀπὸ τοῦ πρέμνου κατακοπτομένου καὶ ἀπὸ τῆς ρίζης [καὶ ἀπὸ τοῦ ξύλου] καὶ ἀπὸ ράβδου καὶ χάρακος ὥσπερ εἴρηται. τῶν δ' ἄλλων ὁ μύρρινος· καὶ γὰρ οὗτος ἀπὸ τῶν ξύλων καὶ τῶν πρέμνων φύεται. δεῖ δὲ καὶ τούτου καὶ τῆς ἐλάας τὰ ξύλα διαιρεῖν μὴ ἐλάττω σπιθαμιαίων καὶ τὸν φλοιὸν μὴ περιαιρεῖν.

Τὰ μὲν οὖν δένδρα βλαστάνει καὶ γίνεται κατὰ τοὺς εἰρημένους τρόπους· αἱ γὰρ ἐμφυτεῖται καὶ οἱ ἐνοφθαλμισμοὶ καθάπερ μίξεις τινές εἰσιν ἢ κατ' ἄλλον τρόπον γενέσεις, περὶ ὧν ὕστερον λεκτέον.

[2.1] Τῶν δὲ φρυγανωδῶν καὶ ποιωδῶν τὰ μὲν πλεῖστα ἀπὸ σπέρματος ἢ ρίζης τὰ δὲ καὶ ἀμφοτέρως· ἔνια δὲ καὶ ἀπὸ τῶν βλαστῶν, ὥσπερ εἴρηται. ῥοδωνία δὲ καὶ κρινωνία κατακοπέντων τῶν καυλῶν, ὥσπερ καὶ ἡ ἄγρωστις. φύεται δὲ ἡ κρινωνία καὶ ἡ ῥοδωνία καὶ ὅλου τοῦ καυλοῦ τεθέντος. ἰδιωτάτη δὲ ἡ ἀπὸ δακρύου· καὶ γὰρ οὕτω δοκεῖ τὸ κρίνον φύεσθαι, ὅταν ξηρανθῇ τὸ ἀπορρυέν. φασὶ δὲ καὶ ἐπὶ τοῦ ἵπποσελίνου· καὶ γὰρ τοῦτο ἀφήσι δάκρυον. φύεται δὲ τις καὶ κάλαμος, ἐὰν τις διατέμνων τὰς ἡλακάτας πλαγίας τιθῇ καὶ κατακρύψει κόπρῳ καὶ γῇ. ἰδίως δὲ ἀπὸ ρίζης [τῷ] φύεσθαι καὶ τὰ κεφαλόρριζα.

[2] Τοσαυταχῶς δὲ οὔσης τῆς δυνάμεως τὰ μὲν πολλὰ τῶν δένδρων, ὥσπερ ἐλέχθη πρότερον, ἐν πλείοσι τρόποις φύεται· ἔνια δὲ ἀπὸ σπέρματος φύεται μόνον, οἷον ἐλάτη πεύκη πίτυς ὅλως πᾶν τὸ κωνοφόρον· ἔτι δὲ καὶ φοῖνιξ, πλὴν εἰ ἄρα ἐν Βαβυλῶνι καὶ ἀπὸ τῶν ῥάβδων [ὥς] φασὶ τινες μολεῦειν. κυπάρитτος δὲ παρὰ μὲν τοῖς ἄλλοις ἀπὸ σπέρματος, ἐν Κρήτῃ δὲ καὶ ἀπὸ τοῦ στελέχους, οἷον ἐπὶ τῆς ὀρείας ἐν Τάρρῳ· παρὰ τούτοις γὰρ ἐστὶν ἡ κουριζομένη κυπάρитτος· αὕτη δὲ ἀπὸ τῆς τομῆς βλαστάνει πάντα τρόπον τεμνομένη καὶ ἀπὸ γῆς καὶ ἀπὸ τοῦ μέσου καὶ ἀπὸ τοῦ ἀνωτέρω· βλαστάνει δὲ ἐνιαχοῦ καὶ ἀπὸ τῶν ριζῶν σπανίως δέ.

[3] Περὶ δὲ δρυὸς ἀμφισβητοῦσιν· οἱ μὲν γὰρ ἀπὸ σπέρματός φασὶ μόνον, οἱ δὲ καὶ ἀπὸ ρίζης γλίσχρως· οἱ δὲ καὶ ἀπ' αὐτοῦ τοῦ στελέχους κοπέντος. ἀπὸ παρασπάδος δὲ καὶ ρίζης οὐδὲν φύεται τῶν μὴ παραβλαστανόντων.

[4] Ἀπάντων δὲ ὅσων πλείους αἱ γενέσεις, ἢ ἀπὸ παρασπάδος καὶ ἔτι μᾶλλον ἢ ἀπὸ παραφυάδος ταχίστη καὶ εὐαυξής, ἐὰν ἀπὸ ρίζης ἢ παραφυὰς ᾖ. καὶ τὰ μὲν οὕτως ἢ ὅλως ἀπὸ φυτευτηρίων πεφυτευμένα πάντα δοκεῖ τοὺς καρποὺς ἐξομοιοῦν. ὅσα δ' ἀπὸ τοῦ καρποῦ τῶν δυναμένων καὶ οὕτως βλαστάνειν, ἅπανθ' ὥς εἰπεῖν χεῖρω, τὰ δὲ καὶ ὅλως ἐξίσταται τοῦ γένους, οἷον ἄμπελος μηλέα συκὴ ῥοιὰ ἄπιος· ἕκ τε γὰρ τῆς κεγχραμίδος οὐδὲν γίνεται γένος ὅλως ἡμερον, ἀλλ' ἢ ἐρινεὸς ἢ ἀγρία συκὴ, διαφέρουσα πολλάκις καὶ τῇ χροίᾳ· καὶ γὰρ ἐκ μελαίνης λευκὴ καὶ ἐκ λευκῆς μέλαινα γίνεται· ἕκ τε τῆς ἀμπέλου τῆς γενναίας ἀγεννῆς· καὶ πολλάκις ἕτερον γένος· ὅτε δὲ ὅλως οὐδὲν ἡμερον ἀλλ' ἄγριον ἐνίοτε καὶ τοιοῦτον ὥστε μὴ ἐκπέττειν τὸν καρπὸν· αἱ δ' ὥστε μὴδὲ ἀδρύνειν ἀλλὰ μέχρι τοῦ ἀνθῆσαι μόνον

ἀφικνεῖσθαι.

[5] Φύονται δὲ καὶ ἐκ τῶν τῆς ἐλάας πυρήνων ἀγριέλαιος, καὶ ἐκ τῶν τῆς ῥόας κόκκων τῶν γλυκέων ἀγεννεῖς, καὶ ἐκ τῶν ἀπυρήνων σκληραί, πολλάκις δὲ καὶ ὀξεῖαι. τὸν αὐτὸν δὲ τρόπον καὶ ἐκ τῶν ἀπίων καὶ ἐκ τῶν μηλέων· ἐκ μὲν γὰρ τῶν ἀπίων μοχθηρὰ ἢ ἀχράς, ἐκ δὲ τῶν μηλέων χείρων τε τῷ γενεῖ καὶ ἐκ γλυκείας ὀξεῖα, καὶ ἐκ στρουθίου Κυδώνιος. χείρων δὲ καὶ ἡ ἀμυγδαλὴ καὶ τῷ χυλῷ καὶ τῷ σκληρὰ ἐκ μαλακῆς· δι' ὃ καὶ αὐξηθεῖσαν ἐγκεντρίξειν κελεύουσιν, εἰ δὲ μὴ τὸ μόσχευμα μεταφυτεύειν πολλάκις.

[6] Χείρων δὲ καὶ ἡ δρυς· ἀπὸ γοῦν τῆς ἐν Πύρρᾳ πολλοὶ φυτεύσαντες οὐκ ἐδύναθ' ὁμοίαν ποιεῖν. δάφνην δὲ καὶ μυρρίνην διαφέρειν ποτέ φασιν, ὥς ἐπὶ τὸ πολὺ δ' ἐξίστασθαι καὶ οὐδὲ τὸ χρῶμα διασώζειν, ἀλλ' ἐξ ἐρυθροῦ καρποῦ γίνεσθαι μέλαιναν, ὥσπερ καὶ τὴν ἐν Ἀντάνδρῳ· πολλάκις δὲ καὶ τὴν κυπάριττον ἐκ θηλείας ἄρρενα. μάλιστα δὲ τούτων ὁ φοῖνιξ δοκεῖ διαμένειν ὥσπερ εἰπεῖν τελείως τῶν ἀπὸ σπέρματος, καὶ πεύκη ἢ κωνοφόρος καὶ πίτυς ἢ φθειροποιός. ταῦτα μὲν οὖν ἐν τοῖς ἡμερωμένοις. ἐν δὲ τοῖς ἀγρίοις δῆλον ὅτι πλείω κατὰ λόγον ὥς ἰσχυροτέροις· ἐπεὶ θάτερόν γε καὶ ἄτοπον, εἰ δὴ χείρω καὶ ἐν ἐκείνοις καὶ ὅλως ἐν τοῖς ἀπὸ σπέρματος μόνον· εἰ μὴ τι τῇ θεραπείᾳ δύνανται μεταβάλλειν.

[7] Διαφέρουσι δὲ καὶ τόποι τόπων καὶ ἀῆρ ἀέρος· ἐνιαχοῦ γὰρ ἐκφέρειν ἢ χώρα δοκεῖ τὰ ὅμοια, καθάπερ καὶ ἐν Φιλίπποις· ἀνάπαλιν ὀλίγα καὶ ὀλιγαχοῦ λαμβάνειν μεταβολήν, ὥστε ἐκ σπέρματος ἀγρίου ποιεῖν ἡμερον ἢ ἐκ χείρονος ἀπλῶς βέλτιον· τοῦτο γὰρ ἐπὶ τῆς ῥόας μόνον ἀκηκόαμεν ἐν Αἰγύπτῳ καὶ ἐν Κιλικίᾳ συμβαίνειν· ἐν Αἰγύπτῳ μὲν γὰρ τὴν ὀξεῖαν καὶ σπαρεῖσαν καὶ φυτευθεῖσαν γλυκεῖαν γίνεσθαι πως ἢ οἰνώδη· περὶ δὲ Σόλους τῆς Κιλικίας περὶ ποταμὸν τὸν Πίναρον, οὗ ἡ μάχη πρὸς Δαρεῖον ἐγένετο, πᾶσαι γίνονται ἀπύρνητοι.

[8] Εὐλογον δὲ καὶ εἴ τις τὸν παρ' ἡμῶν φοίνικα φυτεύοι ἐν Βαβυλῶνι, κάρπιμόν τε γίνεσθαι καὶ ἐξομοιοῦσθαι τοῖς ἐκεῖ. τὸν αὐτὸν δὲ τρόπον καὶ εἴ τις ἐτέρα προσάλληλον ἔχει καρπὸν τόπων· κρεῖττων γὰρ οὗτος τῆς ἐργασίας καὶ τῆς θεραπείας. σημεῖον δ' ὅτι μεταφερόμενα τὰ κεῖθεν ἄκαρπα τὰ δὲ καὶ ὅλως ἀβλαστῇ γίνεται.

[9] Μεταβάλλει δὲ καὶ τῇ τροφῇ καὶ διὰ τὴν ἄλλην ἐπιμέλειαν, οἷς καὶ τὸ ἄγριον ἐξημεροῦται καὶ αὐτῶν δὲ τῶν ἡμέρων ἔνια ἀπαγριοῦται, οἷον ῥόα καὶ ἀμυγδαλὴ. ἤδη δέ τινες καὶ ἐκ κριθῶν ἀναφῶναι φασι πυροὺς καὶ ἐκ πυρῶν κριθὰς καὶ [10] ἐπὶ τοῦ αὐτοῦ πυθμένος ἄμφω. ταῦτα μὲν οὖν ὥς μυθωδέστερα

δεῖ δέχεσθαι. μεταβάλλει δ' οὖν τὰ μεταβάλλοντα τὸν τρόπον τοῦτον αὐτομάτως· ἐξαλλαγῇ δὲ χώρας, ὥσπερ ἐν Αἰγύπτῳ καὶ Κιλικίᾳ περὶ τῶν ῥοῶν εἶπομεν, οὐδὲ διὰ μίαν θεραπείαν.

Ἦσαύτως δὲ καὶ ὅπου τὰ κάρπιμα ἄκαρπα γίνεται, καθάπερ τὸ πέρσιον τὸ ἐξ Αἰγύπτου καὶ ὁ φοῖνιξ ἐν τῇ Ἑλλάδι καὶ εἰ δὴ τις κομίσειε τὴν ἐν Κρήτῃ λεγομένην αἴγειρον. ἔνιοι δὲ φασὶ καὶ τὴν ὄην ἐὰν εἰς ἀλεινὸν ἔλθῃ σφόδρα τόπον ἄκαρπον γίνεσθαι· φύσει γὰρ ψυχρόν. εὐλογον δὲ ἀμφοτέρα συμβαίνειν κατὰ τὰς ἐναντιώσεις, εἴπερ μὴδ' ὅλως ἔνια φύεσθαι θέλει μεταβάλλοντα τοὺς τόπους. καὶ κατὰ μὲν τὰς χώρας αἱ τοιαῦται μεταβολαί.

[11] Κατὰ δὲ τὴν φυτείαν τὰ ἀπὸ τῶν σπερμάτων φυτευόμενα, καθάπερ ἐλέχθη· παντοῖαι γὰρ αἱ ἐξαλλαγαὶ καὶ τούτων. τῇ θεραπείᾳ δὲ μεταβάλλει ῥόα καὶ ἀμυγδαλῇ· ῥόα μὲν κόπρον ὑεῖαν λαβοῦσα καὶ ὕδατος πλήθος ῥυτοῦ· ἀμυγδαλῇ δὲ ὅταν πάτταλόν τις ἐνθῇ, καὶ τὸ δάκρυον ἀφαιρῇ τὸ ἐπιρρέον πλείω χρόνον καὶ τὴν ἄλλην ἀποδιδῶ [12] θεραπείαν. ὡσαύτως δὲ δῆλον ὅτι καὶ ὅσα ἐξημεροῦνται τῶν ἀγρίων ἢ ἀπαγριοῦνται τῶν ἡμέρων· τὰ μὲν γὰρ θεραπείᾳ τὰ δ' ἀθεραπευσία μεταβάλλει· πλὴν εἴ τις λέγοι μὴδὲ μεταβολὴν ἀλλ' ἐπίδοσιν εἰς τὸ βέλτιον εἶναι καὶ χεῖρον· οὐ γὰρ οἷόν τε τὸν κότινον ποιεῖν ἐλάαν οὐδὲ τὴν ἀχράδα ποιεῖν ἄπιον οὐδὲ τὸν ἐρινεὸν συκῆν. ὁ γὰρ ἐπὶ τοῦ κοτίνου φασὶ συμβαίνειν, ὥστ' ἐὰν περικοπεῖς τὴν θαλίαν ὅλως μεταφυτευθῇ φέρειν φαυλίας, μετακίνησίς τις γίνεται οὐ μεγάλη. ταῦτα μὲν οὖν ὁποτέρως δεῖ λαβεῖν οὐθὲν ἄν διαφέρῃ.

[3.1] Φασὶ δ' οὖν αὐτομάτην τινὰ γίνεσθαι τῶν τοιούτων μεταβολήν, ὅτε μὲν τῶν καρπῶν ὅτε δὲ καὶ ὅλως αὐτῶν τῶν δένδρων, ἃ καὶ σημεῖα νομίζουσιν οἱ μάντιες· οἷον ῥόαν ὀξεῖαν γλυκεῖαν ἐξενεγκεῖν καὶ γλυκεῖαν ὀξεῖαν· καὶ πάλιν ἀπλῶς αὐτὰ τὰ δένδρα μεταβάλλειν, ὥστε ἐξ ὀξείας γλυκεῖαν γίνεσθαι καὶ ἐκ γλυκείας ὀξεῖαν· χεῖρον δὲ τὸ εἰς γλυκεῖαν μεταβάλλειν. καὶ ἐξ ἐρινεοῦ συκῆν καὶ ἐκ συκῆς ἐρινεόν· χεῖρον δὲ τὸ ἐκ συκῆς. καὶ ἐξ ἐλάας κότινον καὶ ἐκ κοτίνου ἐλάαν· ἥκιστα δὲ τοῦτο. πάλιν δὲ συκῆν ἐκ λευκῆς μέλαιναν καὶ ἐκ μελαίνης λευκήν. ὁμοίως δὲ τοῦτο καὶ ἐπὶ ἀμπέλῳ.

[2] Καὶ ταῦτα μὲν ὡς τέρατα καὶ παρὰ φύσιν ὑπολαμβάνουσιν· ὅσα δὲ συνήθη τῶν τοιούτων οὐδὲ θαυμάζουσιν ὅλως· οἷον τὸ τὴν κάπνειον ἄμπελον καλουμένην καὶ ἐκ μέλανος βότρυος λευκὸν καὶ ἐκ λευκοῦ μέλανα φέρειν· οὐδὲ γὰρ οἱ μάντιες τὰ τοιαῦτα κρίνουσιν· ἐπεὶ οὐδὲ ἐκεῖνα, παρ' οἷς πέφυκεν ἡ χώρα μεταβάλλειν, ὥσπερ ἐλέχθη περὶ τῆς ῥόας ἐν Αἰγύπτῳ· ἀλλὰ τὸ ἐνταῦθα θαυμαστόν, διὰ τὸ μίαν μόνον ἢ δύο, καὶ ταύτας ἐν τῷ παντὶ χρόνῳ

σπανίας. οὐ μὴν ἄλλ' εἶπερ συμβαίνει, μᾶλλον ἐν τοῖς καρποῖς γίνεσθαι τὴν παραλλαγὴν ἢ ἐν ὅλοις τοῖς δένδροις.

[3] Ἐπεὶ καὶ τοιαύτη τις ἀταξία γίνεται περὶ τοὺς καρπούς· οἷον ἤδη ποτὲ συκῇ τὰ σῦκα ἔφυσεν ἐκ τοῦ ὀπισθεν τῶν θρίων· καὶ ρόα δὲ καὶ ἄμπελος ἐκ τῶν στελεχῶν, καὶ ἄμπελος ἄνευ φύλλων καρπὸν ἤνεγκεν. ἐλάα δὲ τὰ μὲν φύλλα ἀπέβαλε τὸν δὲ καρπὸν ἐξήνεγκεν· ὁ καὶ Θετταλῷ τῷ Πεισιστράτου γενέσθαι λέγεται. συμβαίνει δὲ καὶ διὰ χειμῶνας τοῦτο καὶ δι' ἄλλας αἰτίας ἓνια τῶν δοκούντων εἶναι παρὰ λόγον οὐκ ὄντων δέ· οἷον ἐλάα ποτ' ἀποκαυθεῖσα τελέως ἀνεβλάστησεν ὅλη, καὶ αὐτὴ καὶ ἡ θαλία. ἐν δὲ τῇ Βοιωτίᾳ καταβρωθέντων τῶν ἐρνῶν ὑπ' ἀττελέβων πάλιν ἀνεβλάστησε· τὰ δ' οἷον ἀπέπεσεν. ἥκιστα δ' ἴσως τὰ τοιαῦτα ἄτοπα διὰ τὸ φανερὰς ἔχειν τὰς αἰτίας, ἀλλὰ μᾶλλον τὸ μὴ ἐκ τῶν οἰκείων τόπων φέρειν τοὺς καρπούς ἢ μὴ οἰκείους· καὶ μάλιστα δ' εἰ τῆς ὅλης φύσεως γίνεται μεταβολή, καθάπερ ἐλέχθη. περὶ μὲν οὖν τὰ δένδρα τοιαῦται τινές εἰσι μεταβολαί.

[4.1] Τῶν δὲ ἄλλων τό τε σισύμβριον εἰς μίνθαν δοκεῖ μεταβάλλειν, ἐὰν μὴ κατέχηται τῇ θεραπείᾳ, δι' ὃ καὶ μεταφυτεύουσι πολλάκις, καὶ ὁ πυρὸς εἰς αἶραν. ταῦτα μὲν οὖν ἐν τοῖς δένδροις αὐτομάτως, εἶπερ γίνεται. τὰ δ' ἐν τοῖς ἐπετείοις διὰ παρασκευῆς· οἷον ἡ τίφη καὶ ἡ ζειὰ μεταβάλλουσιν εἰς πυρὸν ἐὰν πτισθεῖσαι σπείρωνται, καὶ τοῦτ' οὐκ εὐθὺς ἀλλὰ τῷ τρίτῳ ἔτει. σχεδὸν δὲ παραπλήσιον τοῦτό γε τῷ τὰ σπέρματα κατὰ τὰς χώρας μεταβάλλειν· μεταβάλλει γὰρ καὶ ταῦτα καθ' ἐκάστην χώραν καὶ σχεδὸν ἐν τῷ ἴσῳ χρόνῳ καὶ ἡ τίφη. μεταβάλλουσι δὲ καὶ οἱ ἄγριοι πυροὶ καὶ αἱ κριθαὶ θεραπευόμεναι καὶ ἐξημερούμεναι κατὰ τὸν ἴσον χρόνον.

[2] Καὶ ταῦτα μὲν ἔοικε χώρας τε μεταβολῇ καὶ θεραπείᾳ γίνεσθαι· καὶ ἓνια ἀμφοτέροις, τὰ δὲ τῇ θεραπείᾳ μόνον· οἷον πρὸς τὸ τὰ ὄσπρια μὴ γίνεσθαι ἀτεράμονα βρέξαντα κελεύουσιν ἐν νίτρῳ νύκτα τῇ ὑστεραίᾳ σπείρειν ἐν ξηρᾷ· φακοὺς ὥστε ἄδροὺς γίνεσθαι φυτεύουσιν ἐν βολίτῳ· τοὺς ἐρεβίνθους δέ, ὥστε μεγάλους, αὐτοῖς τοῖς κελύφεσι βρέξαντα σπείρειν. μεταβάλλουσι δὲ καὶ κατὰ τὰς ὥρας τοῦ σπόρου πρὸς κουφότητα καὶ ἀλυπίαν· οἷον ἐάν τις τοὺς ὀρόβους ἑαρινοὺς σπείρῃ τρισάλυποι γίνονται, καὶ οὐχ ὥς οἱ μετοπωρινοὶ βαρεῖς.

[3] Γίνεται δὲ καὶ ἐν τοῖς λαχάνοις μεταβολὴ διὰ τὴν θεραπείαν· οἷον τὸ σέλινον, ἐὰν σπαρὲν καταπατηθῇ καὶ κυλινδρωθῇ, ἀναφύεσθαι φασιν οὐλόν. μεταβάλλει δὲ καὶ τὴν χώραν ἐξαλλάττοντα, καθάπερ καὶ τᾶλλα. καὶ τὰ μὲν τοιαῦτα κοινὰ πάντων ἐστίν. εἰ δὲ κατὰ τινα πῆρῳσιν ἢ ἀφαίρεσιν μέρους

δένδρον ἄγονον γίνεται, καθάπερ τὰ ζῶα, τοῦτο σκεπτέον· οὐδὲν γοῦν φανερόν κατὰ γε τὴν διαίρεσιν εἰς τὸ πλείω καὶ ἐλάττω φέρειν ὥσπερ κακούμενον, ἀλλ' ἢ ἀπόλλυται τὸ ὅλον ἢ διαμένον καρποφορεῖ. τὸ δὲ γῆρας κοινὴ τις φθορὰ πᾶσιν.

[4] Ἄτοπον δ' ἂν δόξειε μᾶλλον εἰ ἐν τοῖς ζώοις αἱ τοιαῦται μεταβολαὶ φυσικαὶ καὶ πλείους· καὶ γὰρ κατὰ τὰ ὥρας ἔνια δοκεῖ μεταβάλλειν, ὥσπερ ὁ ἰέραξ καὶ ἔποψ καὶ ἄλλα τῶν ὁμοίων ὀρνέων. καὶ κατὰ τὰς τῶν τόπων ἀλλοιώσεις, ὥσπερ ὁ ὕδρος εἰς ἔχιν ξηραινομένων τῶν λιβάδων. φανερώτατα δὲ καὶ κατὰ τὰς γενέσεις ἔνια, καὶ μεταβάλλει διὰ πλειόνων ζώων· οἷον ἐκ κάμπης γίνεται χρυσαλλίς εἴτ' ἐκ ταύτης ψυχὴ· καὶ ἐπ' ἄλλων δ' ἐστὶ τοῦτο πλειόνων, οὐδὲν ἴσως ἄτοπον, οὐδ' ὅμοιον τὸ ζητούμενον. ἀλλ' ἐκεῖνο συμβαίνει περὶ τὰ δένδρα καὶ ὅλως πᾶσαν τὴν ὕλην, ὥσπερ ἐλέγχθη καὶ πρότερον, ὥστε αὐτομάτην μεταβλαστέειν μεταβολῆς τινας γινομένης ἐκ τῶν οὐρανίων τοιαύτης. τὰ μὲν οὖν περὶ τὰς γενέσεις καὶ μεταβολὰς ἐκ τούτων θεωρητέον.

[5.1] Ἐπεὶ δὲ καὶ αἱ ἐργασίαι καὶ αἱ θεραπεῖαι μεγάλα συμβάλλονται, καὶ ἔτι πρότερον αἱ φυτεῖαι καὶ ποιοῦσι μεγάλας διαφοράς, λεκτέον καὶ περὶ τούτων.

Καὶ πρῶτον περὶ τῶν φυτειῶν. αἱ μὲν οὖν ὥραι πρότερον εἴρηνται καθ' ἃς δεῖ. τὰ δὲ φυτὰ λαμβάνειν κελεύουσιν ὥς κάλλιστα καὶ ἐξ ὁμοίας γῆς εἰς ἣν μέλλεις φυτεῦειν, ἢ χεῖρονος· τοὺς δὲ γυροὺς προορύττειν ὥς πλείστου χρόνου καὶ βαθυτέρους αἰεὶ καὶ τοῖς ἐπιτολαιορριζοτέροις.

[2] Λέγουσι δὲ τινες ὡς οὐδεμία κατωτέρω διῴκνεται τριῶν ἡμιποδίων· δι' ὃ καὶ ἐπιτιμῶσι τοῖς ἐν μείζονι βάθει φυτεῦουσιν· οὐκ εἰκόασι δὲ ὀρθῶς λέγειν ἐπὶ πολλῶν· ἀλλ' ἐὰν ἡ χώματος ἐπιλάβηται βαθέος ἢ καὶ χώρας τοιαύτης ἢ καὶ τόπου, πολλῷ μακροτέραν ὥθει τὸ τῇ φύσει βαθύρριζον. πεύκην δὲ τις ἔφη μεταφυτεύων μεμοχλευμένην μείζω τὴν ρίζαν ἔχειν ὀκτάπηχυν καίπερ οὐχ ὅλης ἐξαιρεθείσης ἀλλ' ἀπορραγείσης.

[3] Τὰ δὲ φυτευτήρια ἐὰν μὲν ἐνδέχεται ὑπόρριζα, εἰ δὲ μή, δεῖ μᾶλλον ἀπὸ τῶν κάτω ἢ τῶν ἄνω λαμβάνειν, πλὴν ἀμπέλου· καὶ τὰ μὲν ἔχοντα ρίζας ὀρθὰ ἐμβάλλειν, τὰ δὲ μὴ ἔχοντα ὑποβάλλειν τοῦ φυτευτηρίου ὅσον σπιθαμὴν ἢ μικρῷ πλεῖον. ἔνιοι δὲ κελεύουσιν καὶ τῶν ὑπόρριζων ὑποβάλλειν, τιθέναι δὲ καὶ τὴν θέσιν ὁμοίως ἥνπερ εἶχεν ἐπὶ τῶν δένδρων τὰ πρόσβορρα καὶ τὰ πρὸς ἔω καὶ τὰ πρὸς μεσημβρίαν. ὅσα δὲ ἐνδέχεται τῶν φυτῶν καὶ προμοσχεύειν· τὰ μὲν ἐπ' αὐτῶν τῶν δένδρων, οἷον ἐλάας ἀπίου μηλέας συκῆς· τὰ δ' ἀφαιροῦντας, οἷον ἀμπέλου· ταύτην γὰρ οὐχ οἷόν τε ἐπ' αὐτῆς μοσχεύειν.

[4] Ἐὰν δὲ μὴ ὑπόρριζα τὰ φυτὰ μηδὲ ὑπόπρεμνα λαμβάνειν, καθάπερ τῆς ἐλάας, σχίσαντά τε τὸ ξύλον κάτωθεν καὶ λίθον ἐμβαλόντα φυτεύειν· ὁμοίως δὲ καὶ τῆς ἐλάας καὶ συκῆς καὶ τῶν ἄλλων. φυτεύεται δὲ ἡ συκὴ καὶ ἐάν τις κράδην παχεῖαν ἀποξύνας σφύρα παίη, ἄχρι οὗ ἂν ἀπολίπη μικρὸν ὑπὲρ τῆς γῆς, εἴτ' αὐτῆς ἄμμον βαλὼν ἄνωθεν ἐπιχώσῃ· καὶ γίνεσθαι δὴ φασὶ καὶ καλλίω ταῦτα τὰ φυτὰ, μέχρι οὗ ἂν ᾖ νέα.

[5] Παραπλησία καὶ τῶν ἀμπέλων, ὅταν ἀπὸ τοῦ παττάλου· προοδοποιεῖ γὰρ ὁ πάτταλος ἐκεῖνω τῷ κλήματι διὰ τὴν ἀσθένειαν· φυτεύουσιν οὕτω καὶ ῥόαν καὶ ἄλλα τῶν δένδρων. ἡ συκὴ δέ, ἐὰν ἐν σκίλλῃ φυτευθῇ, θάπτον παραγίνεται καὶ ἦττον ὑπὸ σκωλήκων κατεσθίεται. ὅλως δὲ πᾶν ἐν σκίλλῃ φυτευόμενον εὐβλαστὲς καὶ θάπτον αὐξάνεται. ὅσα δὲ ἐκ τοῦ στελέχους καὶ διακοπτόμενα φυτεύεται, κάτω τρέποντα τὴν τομὴν δεῖ φυτεύειν, διακόπτειν δὲ μὴ ἐλάττω σπιθαμιαίων, ὥσπερ ἐλέχθη, καὶ τὸν φλοιὸν προσεῖναι· φύεται δ' ἐκ τῶν τοιούτων ἔρνη· βλαστανόντων δ' αἰεὶ προσχωννύειν, ἄχρι οὗ ἂν γένηται ἄρτιον· αὕτη μὲν οὖν τῆς ἐλάας ἰδία καὶ τοῦ μυρρίνου, αἱ δ' ἄλλαι κοινότεραι πᾶσιν.

[6] Ἄριστον δὲ καὶ ῥιζώσασθαι καὶ φυτείας μάλιστα τῆς τυχούσης ἡ συκῇ. φυτεύειν δὲ ῥόας μὲν καὶ μυρρίνους καὶ δάφνας πυκνὰς κελεύουσι, μὴ πλεον διεστώσας ἢ ἐννέα πόδας, μηλέας δὲ μικρῷ μακρότερον, ἀπίους δὲ καὶ ὄγχνας ἔτι μᾶλλον, ἀμυγδαλας δὲ καὶ συκάς πολλῷ πλεον, ὡσαύτως δὲ καὶ τὴν ἐλάαν. ποιεῖσθαι δὲ καὶ πρὸς τὸν τόπον τὰς ἀποστάσεις· ἐν γὰρ τοῖς ὀρεινοῖς ἐλάττους ἢ ἐν τοῖς πεδεινοῖς.

[7] Μέγιστον δὲ ὡς εἰπεῖν τὸ τὴν πρόσφορον ἐκάστῳ χώραν ἀποδιδόναι· τότε γὰρ εὐθενεῖ μάλιστα. ὡς δ' ἀπλῶς εἰπεῖν ἐλάα μὲν καὶ συκὴ καὶ ἀμπέλῳ τὴν πεδεινὴν φασὶν οἰκειοτάτην εἶναι, τοῖς δὲ ἀκροδρύοις τὰς ὑπωρείας. χρὴ δὲ καὶ ἐν αὐτοῖς τοῖς ὁμογενέσι μὴ ἀγνοεῖν τὰς οἰκείας. ἐν πλείστῃ δὲ ὡς εἰπεῖν διαφορὰ τὰ τῶν ἀμπέλων ἐστίν· ὅσα γάρ ἐστι γῆς εἶδη, τοσαῦτά τινές φασὶ καὶ ἀμπέλων εἶναι. φυτευόμενα μὲν οὖν κατὰ φύσιν ἀγαθὰ γίνεσθαι παρὰ φύσιν δὲ ἄκαρπα. ταῦτα μὲν οὖν ὥσπερ κοινὰ πάντων.

[6.1] Τῶν δὲ φοινίκων ἴδιος ἡ φυτεία παρὰ τᾶλλα καὶ ἡ μετὰ ταῦτα θεραπεία. φυτεύουσι γὰρ πλείους εἰς ταῦτ' οὐκ ἐκ τῶν ὑπτίων καὶ ἐπιδοῦντες, πρανεῖς δὲ πάντας. τὴν γὰρ ἔκφυσιν οὐκ ἐκ τῶν ὑπτίων καὶ κοίλων ποιεῖται, καθάπερ τινές φασιν, ἀλλ' ἐκ τῶν ἄνω, δι' ὃ καὶ ἐν τῇ ἐπιζεύξει τῶν ἐπιτιθεμένων οὐ δεῖ περικαλύπτειν τὰς ἀρχὰς ὅθεν ἡ ἔκφυσις· φανεραὶ δ' εἰσὶ τοῖς ἐμπείροις. διὰ τοῦτο δ' εἰς τὸ αὐτὸ πλείους τιθέασιν ὅτι

ἀπὸ τοῦ ἐνὸς ἀσθενῆς ἢ φυτεία. τούτων δὲ αἱ τε ρίζαι πρὸς ἀλλήλας συμπλέκονται καὶ εὐθὺς αἱ πρῶται βλαστήσεις, ὥστε ἐν γίνεσθαι τὸ στέλεχος.

[2] Ἡ μὲν οὖν ἀπὸ τῶν καρπῶν φυτεία τοιαύτη τις· ἡ δ' ἀφ' αὐτοῦ, ὅταν ἀφέλωσι τὸ ἄνω ἐν ᾧ περὶ ὁ ἐγκέφαλος· ἀφαιροῦσι δὲ ὅσον δίπηχυν· σχίσαντες δὲ τοῦτο κάτω τιθέασιν τὸ ὑγρόν· φιλεῖ δὲ χώραν ἀλμώδη· δι' ὃ καὶ ὅπου μὴ τοιαύτη τυγχάνει περιπάττουσιν ἄλλας οἱ γεωργοί· τοῦτο δὲ δεῖ ποιεῖν μὴ περὶ αὐτὰς τὰς ρίζας ἀλλ' ἄποθεν ἀποστήσαντα περιπάττειν ὅσον ἡμίεκτον· ὅτι δὲ τοιαύτην ζητεῖ χώραν κάκεῖνο ποιοῦνται σημεῖον· πανταχοῦ γὰρ ὅπου πλῆθος φοινίκων ἀλμώδεις αἱ χώραι· καὶ γὰρ ἐν Βαβυλῶνι φασιν, ὅπου οἱ φοίνικες πεφύκασι, καὶ ἐν Λιβύῃ δὲ καὶ ἐν Αἰγύπτῳ καὶ Φοινίκη καὶ τῆς Συρίας δὲ τῆς κοίτης, ἐν ἣ γ' οἱ πλεῖστοι τυγχάνουσιν, ἐν τρισὶ μόνοις τόποις ἀλμώδεσιν εἶναι τοὺς δυναμένους θησαυρίζεσθαι· τοὺς δ' ἐν τοῖς ἄλλοις οὐ διαμένειν ἀλλὰ σήπεσθαι, χλωροὺς δ' ἡδεῖς εἶναι καὶ καταναλίσκειν οὕτω.

[3] Φιλεῖ δὲ καὶ ὕδρεϊαν σφόδρα τὸ δένδρον· περὶ δὲ κόπρου διαμφισβητοῦσιν· οἱ μὲν γὰρ οὐ φασιν χαίρειν ἀλλ' ἐναντιώτατον εἶναι, οἱ δὲ καὶ χρῆσθαι καὶ ἐπίδοσιν πολλὴν ποιεῖν. δεῖν δ' ὑδρεύειν εὖ μάλα κατὰ τῆς κόπρου, καθάπερ οἱ ἐν Ῥόδῳ. τοῦτο μὲν οὖν ἐπισκεπτέον· ἴσως γὰρ οἱ μὲν οὕτως οἱ δ' ἐκείνως θεραπεύουσιν, καὶ μετὰ μὲν τοῦ ὕδατος ὠφέλιμον ἢ κόπρος ἄνευ δὲ τούτου βλαβερὰ. ὅταν δὲ ἐνιαύσιος γένηται, μεταφυτεύουσι καὶ τῶν ἁλῶν συμπαραβάλλουσι, καὶ πάλιν ὅταν διετῆς· χαίρει γὰρ σφόδρα τῇ μεταφυτεΐᾳ.

[4]

Μεταφυτεύουσι δὲ οἱ μὲν ἄλλοι τοῦ ἥρος· οἱ δὲ ἐν Βαβυλῶνι περὶ τὸ ἄστρον, ὅτε καὶ ὅλως οἱ γε πολλοὶ φυτεύουσιν, ὥς καὶ παραγινόμενου καὶ αὐξανόμενου θᾶπτον. νέου μὲν ὄντος οὐχ ἄπτονται, πλὴν ἀναδοῦσι τὴν κόμην, ὅπως ὀρθοφυῇ τ' ἢ καὶ αἱ ῥάβδοι μὴ ἀπαρτῶνται. μετὰ δὲ ταῦτα περιτέμνουσιν, ὅπότεν ἄδρὸς ἡδὴ γένηται καὶ πάχος ἔχῃ. ἀπολείπουσι δὲ ὅσον σπιθαμὴν τῶν ῥάβδων. φέρει δὲ ἕως μὲν ἂν ἢ νέος ἀπύρηνον τὸν καρπὸν, μετὰ δὲ τοῦτο πυρηνώδη.

[5] Ἄλλοι δὲ τινες λέγουσιν ὡς οἱ γε κατὰ Συρίαν οὐδεμίαν προσάγουσιν ἐργασίαν ἀλλ' ἢ διακαθαίρουσι καὶ ἐπιβρέχουσιν, ἐπιζητεῖν δὲ μᾶλλον τὸ ναματιαῖον ὕδωρ ἢ τὸ ἐκ τοῦ Διός· εἶναι δὲ πολὺ τοιοῦτον ἐν τῷ αὐλῶνι ἐν ᾧ καὶ τὰ φοινικόφυτα τυγχάνει, τὸν αὐλῶνα δὲ τοῦτον λέγειν τοὺς Σύρους ὅτι διατείνει διὰ τῆς Ἀραβίας μέχρι τῆς ἐρυθρᾶς θαλάσσης καὶ πολλοὺς φάσκειν ἐληλυθέναι· τούτου δὲ ἐν τῷ κοιλοτάτῳ πεφυκέναι τοὺς φοίνικας. ταῦτα μὲν οὖν τάχ' ἀμφοτέρως ἂν εἴη· κατὰ γὰρ τὰς χώρας, ὥσπερ καὶ αὐτὰ τὰ δένδρα,

διαφέρειν καὶ τὰς ἐργασίας οὐκ ἄτοπον.

[6] Γένη δὲ τῶν φοινίκων ἐστὶ πλείω· πρῶτον μὲν καὶ ὥσπερ ἐν μεγίστῃ διαφορᾷ τὸ μὲν κάρπιμον τὸ δὲ ἄκαρπον, ἐξ ὧν οἱ περὶ Βαβυλῶνα τάς τε κλίνας καὶ τᾶλλα σκευὴ ποιοῦνται. ἔπειτα τῶν καρπίμων οἱ μὲν ἄρρενες αἱ δὲ θήλειαι· διαφέρουσι δὲ ἀλλήλων, καθ' ἃ ὁ μὲν ἄρρην ἄνθος πρῶτον φέρει ἐπὶ τῆς σπάθης, ἡ δὲ θήλεια καρπὸν εὐθὺ μικρόν. αὐτῶν δὲ τῶν καρπῶν διαφοραὶ πλείους· οἱ μὲν γὰρ ἀπύρηνοι οἱ δὲ μαλακοπύρηνοι· τὰς χροιάς οἱ μὲν λευκοὶ οἱ δὲ μέλανες οἱ δὲ ξανθοί· τὸ δ' ὅλον οὐκ ἐλάττω χρώματά φασι εἶναι τῶν συκῶν οὐδ' ἀπλῶς τὰ γένη· διαφέρειν δὲ καὶ κατὰ τὰ μεγέθη καὶ κατὰ τὰ σχήματα· καὶ γὰρ σφαιροειδεῖς ἐνίους ὥσανει μῆλα καὶ τὰ μεγέθη τηλικούτους ὡς τέτταρας εἰς τὸν πῆχυν εἶναι, [ἔπτα καὶ εὐπόδους]· ἄλλους δὲ μικροὺς ἡλίους ἐρεβίνθους. καὶ τοῖς χυλοῖς δὲ πολὺ διαφέροντας.

[7] Κράτιστον δὲ καὶ τῶν λευκῶν καὶ τῶν μελάνων τὸ βασιλικὸν καλούμενον γένος ἐν ἑκατέρῳ καὶ μεγέθει καὶ ἀρετῇ· σπάνια δ' εἶναι ταῦτα λέγουσι· σχεδὸν γὰρ ἐν μόνῳ τῷ Βαγῶφι κήπῳ τοῦ παλαιοῦ περὶ Βαβυλῶνα. ἐν Κύπρῳ δὲ ἴδιόν τι γένος φοινίκων ἐστὶν ὃ οὐ πεπαίνει τὸν καρπὸν, ἀλλ' ὠμὸς ὢν ἡδὺς σφόδρα καὶ γλυκύς ἐστι· τὴν δὲ γλυκύτητα ἰδίαν ἔχει. ἔνιοι δ' οὐ μόνον διαφέρουσι τοῖς καρποῖς ἀλλὰ καὶ αὐτῷ τῷ δένδρῳ κατὰ τε τὸ μῆκος καὶ τὴν ἄλλην μορφήν· οὐ γὰρ μεγάλοι καὶ μακροὶ ἀλλὰ βραχεῖς, ἔτι δὲ καρπιμώτεροι τῶν ἄλλων καὶ καρποφοροῦντες εὐθὺς τριετείς· πολλοὶ δὲ καὶ οὗτοι περὶ Κύπρον. εἰσὶ δὲ καὶ περὶ Συρίαν καὶ περὶ Αἴγυπτον φοίνικες οἱ φέρουσι τετραετείς καὶ πενταετείς ἀνδρομήκεις ὄντες.

[8] Ἔτερον δ' ἔτι γένος ἐν Κύπρῳ, ὃ καὶ τὸ φύλλον πλατύτερον ἔχει καὶ τὸν καρπὸν μείζω πολλῷ καὶ ιδιόμορφον· μεγέθει μὲν ἡλίκος ῥόα τῷ σχήματι δὲ προμήκης, οὐκ εὐχυλος δὲ ὥσπερ ἄλλοι ἀλλ' ὁμοῖος ταῖς ῥόαις, ὥστε μὴ καταδέχεσθαι ἀλλὰ διαμασησαμένους ἐκβάλλειν. γένη μὲν οὖν, ὥσπερ εἴρηται, πολλὰ. θησαυρίζεσθαι δὲ μόνους δύνασθαι φασι τῶν ἐν Συρίᾳ τοὺς ἐν τῷ αὐλῶνι, τοὺς δ' ἐν Αἰγύπτῳ καὶ Κύπρῳ καὶ παρὰ τοῖς ἄλλοις χλωροὺς ἀναλίσκεσθαι.

[9] Ἔστι δὲ ὁ φοῖνιξ ὡς μὲν ἀπλῶς εἰπεῖν μονοστέλεχος καὶ μονοφυές· οὐ μὴν ἀλλὰ γίνονται τινες καὶ διφυεῖς, ὥσπερ ἐν Αἰγύπτῳ, καθάπερ δικρόαν ἔχοντες· τὸ δ' ἀνάστημα τοῦ στελέχους ἀφ' οὗ ἡ σχίσις καὶ πεντάπηχυ· πρὸς ἀλλήλα δὲ πῶς ἰσάζοντα. φασι δὲ καὶ τοὺς ἐν Κρήτῃ πλείους εἶναι τοὺς διφυεῖς, ἐνίους δὲ καὶ τριφυεῖς· ἐν δὲ τῇ Λαπαίᾳ τινὰ καὶ πεντακέφαλον· οὐκ ἄλογον γοῦν ἐν ταῖς εὐτροφωτέραις χώραις πλείω γίνεσθαι τὰ τοιαῦτα καὶ τὸ

ὄλον δὲ τὰ εἶδη πλείω καὶ τὰς διαφοράς.

[10] Ἄλλο δέ τι γένος ἐστὶν ὃ φασὶ γίνεσθαι πλεῖστον περὶ τὴν Αἰθιοπίαν, ὃ καλοῦσι κόικας· οὗτοι δὲ θαμνώδεις, οὐχὶ ἐν τῷ στέλεχος ἔχοντες ἀλλὰ πλείω καὶ ἐνίοτε συνηρητημένα μέχρι τινὸς εἰς ἓν, τὰς δὲ ῥάβδους οὐ μακρὰς μὲν ἀλλ’ ὅσον πηχυαίας, ἀλλὰ λείας, ἐπὶ δὲ τῶν ἄκρων τὴν κόμην. ἔχουσι δὲ καὶ τὸ φύλλον πλατὺ καὶ ὥσπερ ἐκ δυοῖν συγκεῖμενον ἐλαχίστοιν. καλοὶ δὲ καὶ τῇ ὄψει φαίνονται· τὸν δὲ καρπὸν καὶ τῷ σχήματι καὶ τῷ μεγέθει καὶ τῷ χυλῷ διάφορον ἔχουσι· στρογγυλώτερον γὰρ καὶ μείζω καὶ εὐστομώτερον ἥττον δὲ γλυκύν. πεπαίνουνσι δὲ ἐν τρισὶν ἔτεσιν ὥστ’ αἰὶ καρπὸν ἔχειν, ἐπικαταλαμβάνοντος τοῦ νέου τὸν ἔνον· ποιοῦσι δὲ καὶ ἄρτους ἐξ αὐτῶν· περὶ μὲν οὖν τούτων ἐπισκεπτέον.

[11] Οἱ δὲ χαμαιριφιεῖς καλούμενοι τῶν φοινίκων ἕτερόν τι γένος ἐστὶν ὥσπερ ὁμώνυμον· καὶ γὰρ ἐξαιρεθέντος τοῦ ἐγκεφάλου ζῶσι καὶ κοπέντες ἀπὸ τῶν ῥιζῶν παραβλαστάνουσι. διαφέρουσι δὲ καὶ τῷ καρπῷ καὶ τοῖς φύλλοις· πλατὺ γὰρ καὶ μαλακὸν ἔχουσι τὸ φύλλον, δι’ ὃ καὶ πλέκουσιν ἐξ αὐτοῦ τὰς τε σπυρίδας καὶ τοὺς φορμούς· πολλοὶ δὲ καὶ ἐν τῇ Κρήτῃ γίνονται καὶ ἔτι μᾶλλον ἐν Σικελίᾳ. ταῦτα μὲν οὖν ἐπὶ πλεῖον εἴρηται τῆς ὑποθέσεως.

[12] Ἐν δὲ ταῖς τῶν ἄλλων φυτεῖαις ἀνάπαλιν τίθενται τὰ φυτευτήρια, καθάπερ τῶν κλημάτων. οἱ μὲν οὖν οὐθὲν διαφέρειν φασὶν ἥκιστα δὲ ἐπὶ τῶν ἀμπέλων· ἔνιοι δὲ ῥόαν δασύνεσθαι καὶ σκιάζειν μᾶλλον τὸν καρπὸν· ἔτι δὲ ἥττον ἀποβάλλειν τοὺς κυτίνους. συμβαίνειν δὲ τοῦτό φασὶ καὶ ἐπὶ τῆς συκῆς· οὐ γὰρ ἀποβάλλειν ἀνάπαλιν φυτευθεῖσαν, ἔτι δ’ εὐβατωτέραν γίνεσθαι· οὐκ ἀποβάλλειν δὲ οὐδ’ ἐάν τις ἀποκλάσῃ φυομένης εὐθύς τὸ ἄκρον.

Αἱ μὲν οὖν φυτεῖαι καὶ γενέσεις ὃν τρόπον ἔχουσι σχεδὸν ὡς τύπων περιλαβεῖν εἴρηται.

[7.1] Περὶ δὲ τῆς ἐργασίας καὶ τῆς θεραπείας τὰ μὲν ἐστὶ κοινὰ τὰ δὲ ἴδια καθ’ ἕκαστον. κοινὰ μὲν ἢ τε σκαπάνη καὶ ἡ ὑδρεία καὶ ἡ κόπρωσις, ἔτι δὲ ἡ διακάθαρσις καὶ ἀφαίρεσις τῶν αὐῶν. διαφέρουσι δὲ τῷ μᾶλλον καὶ ἥττον. τὰ μὲν φίλυδρα καὶ φιλόκοπρα τὰ δ’ οὐχ ὁμοίως, οἷον ἡ κυπάριττος, ἥπερ οὐ φιλόκοπρον οὐδὲ φίλυδρον, ἀλλὰ καὶ ἀπόλλυσθαί φασιν ἐάν γε νέαν οὔσαν ἐφυδρεύωσι πολλῷ. ῥόα δὲ καὶ ἄμπελος φίλυδρα. συκὴ δὲ εὐβλαστοτέρα μὲν ὑδρευομένη τὸν δὲ καρπὸν ἴσχει χεῖρω πλὴν τῆς Λακωνικῆς· αὕτη δὲ φίλυδρος.

[2] Διακαθαίρεσθαι δὲ πάντα ζητεῖ· βελτίω γὰρ τῶν αὐῶν ἀφαιρουμένων ὥσπερ ἀλλοτρίων, ἃ καὶ τὰς αὐξήσεις καὶ τὰς τροφὰς ἐμποδίζει. δι’ ὃ καὶ ...

ὅταν ἡ γεράνδρου ὅλως κόπτουσι· ἡ γὰρ βλάστησις νέα γίνεται τοῦ δένδρου. πλείστης δὲ διακαθάρσεώς φησιν Ἀνδροτίων δεῖσθαι μύρρινον καὶ ἐλάαν· ὅσῳ γὰρ ἂν ἐλάττω καταλίπῃς, ἄμεινον βλαστήσει καὶ τὸν καρπὸν οἶσει πλείω· πλὴν ἀμπέλου δηλὸν ὅτι· ταύτη γὰρ ἀναγκαιότερον καὶ πρὸς βλάστησιν καὶ πρὸς εὐκαρπίαν. ἀπλῶς δὲ καὶ ταύτην καὶ τὴν ἄλλην θεραπείαν πρὸς τὴν ἰδίαν φύσιν ἐκάστω ποιητέον.

[3] Δεῖσθαι δὲ φησιν Ἀνδροτίων καὶ κόπρου δριμυτάτης καὶ πλείστης ὑδρείας, ὥσπερ καὶ τῆς διακαθάρσεως, ἐλάαν καὶ μύρρινον καὶ ρόαν· οὐ γὰρ ἔχειν μήτραν οὐδὲ νόσημα κατὰ γῆς οὐδέν· ἀλλ' ἐπειδὴν παλαιὸν ἡ τὸ δένδρον, ἀποτέμνεται δεῖν τοὺς ἀκρεμόνας ἔπειτα τὸ στελέχος θεραπεύειν ὥσπερ ἂν ἐξ ἀρχῆς φυτευθέν· οὕτω δὲ φασὶ πολυχρονιώτερα καὶ ἰσχυρότατα μύρρινον εἶναι καὶ ἐλάαν. ταῦτα μὲν οὖν ἐπισκέψαιτ' ἂν τις, εἰ καὶ μὴ πάντα ἀλλὰ περὶ γε τῆς μήτρας.

[4] Ἡ δὲ κόπρος οὔτε πᾶσιν ὁμοίως οὕθ' ἡ αὐτὴ πᾶσιν ἀρμόττει· τὰ μὲν γὰρ δριμείας δεῖται τὰ δ' ἥττον τὰ δὲ παντελῶς κούφης. δριμυτάτη δὲ ἡ τοῦ ἀνθρώπου· καθάπερ καὶ Χαρτόδρας ἀρίστην μὲν ταύτην εἶναι φησι, δευτέραν δὲ τὴν ὑείαν, τρίτην δὲ αἰγός, τετάρτην δὲ προβάτου, πέμπτην δὲ βοός, ἕκτην δὲ τὴν λοφούρων. ἡ δὲ συρματίτις ἄλλη καὶ ἄλλως· ἡ μὲν γὰρ ἀσθενεστέρα ταύτης ἡ δὲ κρείττων.

[5] Τὴν δὲ σκαπάνην πᾶσιν οἴονται συμφέρειν, ὥσπερ καὶ τὴν ὄσκαλσιν τοῖς ἐλάττοσιν· εὐτραφέστερα γὰρ γίνεσθαι. τρέφειν δὲ δοκεῖ καὶ ὁ κονιορτὸς ἔνια καὶ θάλλειν ποιεῖν, οἷον τὸν βότρυ, δι' ὃ καὶ ὑποκονίουσι πολλάκις· οἱ δὲ καὶ τὰς συκᾶς ὑποσκάπτουσι ἔνθα τούτου δεῖ. Μεγαροὶ δὲ καὶ τοὺς σικύους καὶ τὰς κολοκύντας, ὅταν οἱ ἐτησίαι πνεύσωσι, σκάλλοντες κονιορτοῦσι καὶ οὕτω γλυκυτέρους καὶ ἀπαλωτέρους ποιοῦσιν οὐχ ὑδρεύοντες. τοῦτο μὲν οὖν ὁμολογούμενον. τὴν δ' ἄμπελον οὐ φασὶ τινες δεῖν [ἡ] ὑποκονίειν οὐδ' ὅλως ἄπτεσθαι περκάζοντος τοῦ βότρυος, ἀλλ' εἴπερ ὅταν ἀπομελανθῇ. οἱ δὲ τὸ ὅλον μηδὲ τότε πλὴν ὅσον ὑποτίλαι τὴν βοτάνην· ὑπὲρ μὲν οὖν τούτων ἀμφισβητοῦσιν.

[6] Ἐὰν δὲ τι μὴ φέρῃ καρπὸν ἀλλ' εἰς βλάστησιν τρέπηται, σχίζουσι τοῦ στελέχους τὸ κατὰ γῆν καὶ λίθον ἐντιθέασιν ὅπως ἂν ῥαγῇ, καὶ φασὶ φέρειν. ὁμοίως δὲ καὶ ἐὰν τις τῶν ῥιζῶν τινὰς περιτέμῃ, δι' ὃ καὶ τῶν ἀμπέλων ὅταν τραγῶσι τοῦτο ποιοῦσι τὰς ἐπιπολῆς. τῶν δὲ συκῶν πρὸς τῇ περιτέμνεται καὶ τέφραν περιπάττουσι καὶ κατασχάζουσι τὰ στελέχη καὶ φασὶ φέρειν μᾶλλον. ἀμυγδαλῇ δὲ καὶ πάτταλον ἐγκόψαντες σιδηροῦν ὅταν τετράνωσιν ἄλλον

ἀντεμβάλλουσι δρυῖνον καὶ τῇ γῇ κρύπτουσιν· ὁ καὶ καλοῦσι τινες κολάζειν ὡς ὑβρίζον τὸ δένδρον.

[7] Ταῦτόν δὲ τοῦτο καὶ ἐπὶ τῆς ἀπίου καὶ ἐπ' ἄλλων τινὲς ποιοῦσιν. ἐν Ἀρκαδίᾳ δὲ καὶ εὐθύνειν καλοῦσι τὴν ὄαν· πολὺ γὰρ τὸ δένδρον τοῦτο παρ' αὐτοῖς ἐστὶ. καὶ φασιν, ὅταν πάθῃ τοῦτο, τὰς μὲν μὴ φερούσας φέρειν τὰς δὲ μὴ πεττούσας ἐκπέττειν καλῶς. ἀμυγδαλὴν δὲ καὶ ἐκ πικρᾶς γίγνεσθαι γλυκεῖαν, ἔαν τις περιορύζας τὸ στέλεχος καὶ τιτράνας ὅσον τε παλαιστιαῖον τὸ πανταχόθεν ἀπορρέον δάκρυον ἐπὶ ταῦτο ἔῃ καταρρεῖν. τοῦτο μὲν οὖν ἂν εἴη πρὸς τε τὸ φέρειν ἅμα καὶ πρὸς τὸ εὐκαρπεῖν.

[8.1] Αποβάλλει δὲ πρὸ τοῦ πέσαι τὸν καρπὸν ἀμυγδαλῇ μηλέα ῥόα ἄπιος καὶ μάλιστα δὴ πάντων συκῇ καὶ φοῖνιξ, πρὸς ἃ καὶ τὰς βοηθείας ζητοῦσι· ὅθεν καὶ ὁ ἐρινασμός· ἐκ γὰρ τῶν ἐκεῖ κρεμαννυμένων ἐρινῶν ψῆνες ἐκδύομενοι κατεσθίουσι καὶ πιαίνουσι τὰς κορυφάς. διαφέρουσι δὲ καὶ αἱ χῶραι πρὸς τὰς ἀποβολάς· περὶ γὰρ Ἰταλίαν οὐ φασιν ἀποβάλλειν, δι' ὃ οὐδ' ἐρινάζουσιν· οὐδ' ἐν τοῖς καταβορείοις καὶ λεπτογείοις, οἷον ἐπὶ Φαλύκῃ τῆς Μεγαρίδος· οὐδὲ τῆς Κορινθίας ἐν τισὶ τόποις. ὡσαύτως δὲ καὶ ἡ τῶν πνευμάτων κατάστασις· βορείοις γὰρ μᾶλλον ἢ νοτίοις ἀποβάλλουσι, κἂν ψυχρότερα καὶ πλείω γένηται μᾶλλον· ἔτι δ' αὐτῶν τῶν δένδρων ἡ φύσις· τὰ πρῶτα γὰρ ἀποβάλλει, τὰ δ' ὄψια οὐκ ἐκβάλλει, καθάπερ ἡ Λακωνικὴ καὶ αἱ ἄλλαι. δι' ὃ καὶ οὐκ ἐρινάζουσι ταῦτα. ταῦτα μὲν οὖν ἐν τε τοῖς τόποις καὶ τοῖς γένεσι καὶ τῇ καταστάσει τοῦ ἀέρος ἔχει τὰς διαφοράς.

[2] Οἱ δὲ ψῆνες ἐκδύονται μὲν ἐκ τοῦ ἐρινεοῦ, καθάπερ εἴρηται· γίνονται δ' ἐκ τῶν κεγχραμίδων. σημεῖον δὲ λέγουσιν, ὅτι ἐπειδὰν ἐκδύωσιν οὐκ ἔνεισι κεγχραμίδες. ἐκδύονται δὲ οἱ πολλοὶ ἐγκαταλιπόντες ἢ πόδα ἢ πτερόν. γένος δέ τι καὶ ἕτερόν ἐστι τῶν ψηνῶν, ὃ καλοῦσι κεντρίνας· οὗτοι δ' ἄργοι καθάπερ κηφῆνες· καὶ τοὺς εἰσδυομένους τῶν ἐτέρων κτείνουσιν αὐτοὶ δὲ ἐναποθνήσκουσιν. ἐπαινοῦσι δὲ μάλιστα τῶν ἐρινῶν τὰ μέλανα τὰ ἐκ τῶν πετρωδῶν χωρίων· πολλὰς [3] γὰρ ἔχει ταῦτα κεγχραμίδας. γινώσκεται δὲ τὸ ἐρινασμένον τῷ ἐρυθρὸν εἶναι καὶ ποικίλον καὶ ἰσχυρόν· τὸ δ' ἀνερίναστον λευκὸν καὶ ἀσθενές· προστιθέασι δὲ τοῖς δεομένοις ὅταν ὕσῃ. ὅπου δὲ πλεῖστος κονιορτός, ἐνταῦθα πλεῖστα καὶ ἰσχυρότατα τὰ ἐρινὰ γίνεται. φασὶ δὲ ἐρινάζειν καὶ τὸ πόλιον, ὁπότεν αὐτῷ καρπὸς ἦ πολὺς, καὶ τοὺς τῆς πτελέας κωρύκους· ἐγγίνεται γὰρ καὶ ἐν τούτοις θηρίδι' ἄττα. κνῖπες ὅταν ἐν ταῖς συκαῖς γίνωνται κατεσθίουσι τοὺς ψήνας. ἄκος δὲ τούτου φασὶν εἶναι τοὺς καρκίνους προσπερονᾶν· πρὸς γὰρ τούτους τρέπεσθαι τοὺς κνίπας. ἀλλὰ

γὰρ δὴ ταῖς μὲν συκαῖς αὗται βοήθειαι.

[4] Τοῖς δὲ φοίνιξιν αἱ ἀπὸ τῶν ἄρρένων πρὸς τοὺς θήλεις· οὗτοι γὰρ εἰσιν οἱ ἐπιμένειν ποιοῦντες καὶ ἐκπέττειν, ὃ καλοῦσί τινες ἐκ τῆς ὁμοιότητος ὀλυνθάζειν. γίνεται δὲ τόνδε τὸν τρόπον. ὅταν ἀνθῇ τὸ ἄρρεν, ἀποτέμνουσι τὴν σπάθην ἐφ' ἧς τὸ ἄνθος εὐθὺς ὥσπερ ἔχει, τὸν τε χνοῦν καὶ τὸ ἄνθος καὶ τὸν κονιορτὸν κατασείουσι κατὰ τοῦ καρποῦ τῆς θηλείας· καὶ τοῦτο πάθη, διατηρεῖ καὶ οὐκ ἀποβάλλει. φαίνεται δ' ἀμφοῖν ἀπὸ τοῦ ἄρρενος τοῖς θήλεσι βοήθεια γίνεσθαι· θῆλυ γὰρ καλοῦσι τὸ καρποφόρον· ἀλλ' ἡ μὲν οἶον μῖξις· ἡ δὲ κατ' ἄλλον τρόπον.

Liber III

[1] Ἐπεὶ δὲ περὶ τῶν ἡμέρων δένδρων εἴρηται, λεκτέον ὁμοίως καὶ περὶ τῶν ἀγρίων, εἴ τί τι ταῦτόν καὶ ἕτερον ἔχουσι τοῖς ἡμέροις εἴ θ' ὅλως ἴδιον τῆς φύσεως.

Αἱ μὲν οὖν γενέσεις ἀπλαῖ τινες αὐτῶν εἰσι· πάντα γὰρ ἢ ἀπὸ σπέρματος ἢ ἀπὸ ρίζης φύεται. τοῦτο δ' οὐχ ὥς οὐκ ἐνδεχόμενον καὶ ἄλλως, ἀλλ' ἴσως διὰ τὸ μὴ πειρᾶσθαι μηδένα μηδὲ φυτεύειν· ἐκφύοιτο δ' ἂν εἰ λαμβάνοιεν τόπους ἐπιτηδεῖους καὶ θεραπείαν τὴν ἀρμόττουσαν· ὥσπερ καὶ νῦν τὰ ἀλσώδη καὶ φίλυδρα, λέγω δ' οἷον πλάτανον ἰτέαν λεύκην αἰγειρον πετέαν· ἅπαντα γὰρ ταῦτα καὶ τὰ τοιαῦτα φυτεύόμενα βλαστάνει καὶ τάχιστα καὶ κάλλιστα ἀπὸ τῶν παρασπάδων, ὥστε καὶ μεγάλας οὖσας ἤδη καὶ ἰσοδένδρους ἂν τις μεταθῇ διαμένειν· φυτεύεται δὲ τὰ πολλὰ αὐτῶν καὶ καταπηγνύμενα, καθάπερ ἡ λεύκη καὶ ἡ αἰγειρος.

[2] Τούτων μὲν οὖν πρὸς τῇ σπερματικῇ καὶ τῇ ἀπὸ τῶν ριζῶν καὶ αὕτη γενεσίς ἐστι· τῶν δὲ ἄλλων ἐκεῖναι· πλὴν ὅσα μόνον ἀπὸ σπέρματος φύεται, καθάπερ ἐλάτη πεύκη πίτυς. ὅσα δὲ ἔχει σπέρμα καὶ καρπὸν, κἂν ἀπὸ ρίζης γίνηται, καὶ ἀπὸ τούτων· ἐπεὶ καὶ τὰ δοκοῦντα ἄκαρπα εἶναι γεννᾶν φασιν, οἷον πετέαν ἰτέαν. σημεῖον δὲ λέγουσιν οὐ μόνον ὅτι φύεται πολλὰ τῶν ριζῶν ἀπηρητημένα καθ' οὓς ἂν ἦ τόπους, ἀλλὰ καὶ τὰ συμβαίνοντα θεωροῦντες, οἷον ἐν Φενεᾷ τῆς Ἀρκαδίας, ὡς ἐξερράγη τὸ συναθροισθὲν ὕδωρ ἐν τῷ πεδίῳ φραχθέντων τῶν βερέθρων· ὅπου μὲν ἐγγὺς ἦσαν ἰτέαι πεφυκυῖαι τοῦ καταποθέντος τόπου, τῷ ὑστέρω ἔτει μετὰ τὴν ἀναζήρανσιν ἐνταῦθα αὐθις ἀναφῦναι φασιν ἰτέαν· ὅπου δὲ πετέαι αὐθις πετέας, καθάπερ καὶ ὅπου πεῦκαι καὶ ἔλαται πεύκας καὶ ἐλάτας, ὥσπερ μιμουμένων κάκεϊνων.

[3] Ἀλλὰ τὴν ἰτέαν ταχὺ προκαταβάλλειν πρὸ τοῦ τελείως ἀδρῦναι καὶ πέψαι τὸν καρπὸν· δι' ὃ καὶ τὸν ποιητὴν οὐ κακῶς προσαγορεύειν αὐτὴν ὠλεσίκαρπον.

Τῆς δὲ πετέας κάκεϊνο σημεῖον ὑπολαμβάνουσιν· ὅταν γὰρ ἀπὸ τῶν πνευμάτων εἰς τοὺς ἐχομένους τόπους ὁ καρπὸς ἀπενεχθῇ, φύεσθαί φασι. παραπλήσιον δὲ ἔοικεν εἶναι τὸ συμβαῖνον ὃ καὶ ἐπὶ τῶν φρυγανικῶν καὶ ποιωδῶν τινῶν ἐστίν· οὐκ ἐχόντων γὰρ σπέρμα φανερόν, ἀλλὰ τῶν μὲν οἷον χνοῦν τῶν δ' ἄνθος, ὥσπερ τὸ θύμον, ὅμως ἀπὸ τούτων βλαστάνουσιν. ἐπεὶ ἢ γε πλάτανος ἔχει φανερῶς καὶ ἀπὸ τούτων φύεται. τοῦτο δ' ἐξ ἄλλων τε δῆλον κάκεϊνο μέγιστον σημεῖον· ὥφθη γὰρ ἤδη ποτὲ πεφυκυῖα πλάτανος ἐν τρίποδι

χαλκῷ.

[4] Ταύτας τε δὴ τὰς γενέσεις ὑποληπτέον εἶναι τῶν ἀγρίων καὶ ἔτι τὰς αὐτομάτους, ἃς καὶ οἱ φυσιολόγοι λέγουσιν· Ἀναξαγόρας μὲν τὸν ἀέρα πάντων φάσκων ἔχειν σπέρματα καὶ ταῦτα συγκαταφερόμενα τῷ ὕδατι γεννᾶν τὰ φυτὰ· Διογένης δὲ σηπομένου τοῦ ὕδατος καὶ μίξιν τινὰ λαμβάνοντος πρὸς τὴν γῆν· Κλειδήμος δὲ συνεστάναι μὲν ἐκ τῶν αὐτῶν τοῖς ζώοις, ὅσῳ δὲ θολερωτέρων καὶ ψυχροτέρων τοσοῦτον ἀπέχειν τοῦ ζῶα εἶναι. [λέγουσι δὲ τινες καὶ ἄλλοι περὶ τῆς γενέσεως.]

[5] Ἄλλ' αὕτη μὲν ἀπηρτημένη πῶς ἐστὶ τῆς αἰσθήσεως. ἄλλαι δὲ ὁμολογούμεναι καὶ ἐμφανεῖς, οἷον ὅταν ἔφοδος γένηται ποταμοῦ παρεκβάντος τὸ ρεῖθρον ἢ καὶ ὅλως ἐτέρωθι ποιησαμένου, καθάπερ ὁ Νέσος ἐν τῇ Ἀβδηρίτιδι πολλάκις μεταβαίνει, καὶ ἅμα τῇ μεταβάσει τοσαύτην ὕλην συγγεννᾷ τοῖς τόποις, ὥστε τῷ τρίτῳ ἔτει συνηρεφεῖν. καὶ πάλιν ὅταν ἐπομβρίαὶ κατάσχωσι πλείω χρόνον· καὶ γὰρ ἐν ταύταις βλαστήσεις γίνονται φυτῶν. ἔοικε δὲ ἡ μὲν τῶν ποταμῶν ἔφοδος ἐπάγειν σπέρματα καὶ καρπούς, καὶ τοὺς ὀχετοὺς φασὶ τὰ τῶν ποιωδῶν· ἡ δ' ἐπομβρία τοῦτο ποιεῖ ταυτό· συγκαταφέρει γὰρ πολλὰ τῶν σπερμάτων, καὶ ἅμα σῆψιν τινὰ τῆς γῆς καὶ τοῦ ὕδατος· ἐπεὶ καὶ ἡ μίξις αὕτη τῆς Αἰγυπτίας [6] γῆς δοκεῖ τινὰ γεννᾶν ὕλην. ἐνιαχοῦ δέ, ἂν μόνον ὑπεργάσωνται καὶ κινήσωσιν, εὐθὺς ἀναβλαστάνει τὰ οἰκεῖα τῆς χώρας, ὥσπερ ἐν Κρήτῃ κυπάριττοι. γίνεται δὲ παραπλήσιόν τι τούτῳ καὶ ἐν τοῖς ἐλάττοσιν· ἅμα γὰρ κινουμένης ἀναβλαστάνει πόα τις ἐν ἐκάστοις. ἐν δὲ τοῖς ἡμιβρόχοις ἐὰν ὑπονεάσης φαίνεσθαι φασὶ τρίβολον. αὗται μὲν οὖν ἐν τῇ μεταβολῇ τῆς χώρας εἰσίν, εἴτε καὶ ἐνυπαρχόντων σπερμάτων εἴτε καὶ αὐτῆς πῶς διατιθεμένης· ὅπερ ἴσως οὐκ ἄτοπον ἐγκατακλειομένων ἅμα τῶν ὑγρῶν· ἐνιαχοῦ δὲ καὶ ὑδάτων ἐπιγινομένων ιδιώτερον ἀνατεῖλαι ὕλης πλῆθος, ὥσπερ ἐν Κυρήνῃ πιττώδους τινὸς γενομένου καὶ παχέος· οὕτως γὰρ ἀνεβλάστησεν ἡ πλησίον ὕλη πρότερον οὐκ οὔσα. φασὶ δὲ καὶ τό γε σίλφιον οὐκ ὄν πρότερον ἐκ τοιαύτης τινὸς αἰτίας φανῆναι. τρόποι μὲν οὖν τοιοῦτοι τῶν τοιούτων γενέσεων.

[2.1] Πάντα δὲ κάρπιμα ἢ ἄκαρπα, καὶ ἀείφυλλα ἢ φυλλοβόλα, καὶ ἀνθοῦντα ἢ ἀνανθη· κοινὰ γάρ τινες διαιρέσεις ἐπὶ πάντων εἰσίν ὁμοίως ἡμέρων τε καὶ ἀγρίων. ἴδια δὲ πρὸς τὰ ἡμέρα τῶν ἀγρίων ὀψικαρπία τε καὶ ἰσχύς καὶ πολυκαρπία τῷ προφαίνειν· πεπαίνει τε γὰρ ὀψιαίτερον καὶ τὸ ὅλον ἀνθεῖ καὶ βλαστάνει ὥς ἐπὶ τὸ πᾶν· καὶ ἰσχυρότερα τῇ φύσει· καὶ προφαίνει μὲν πλείω καρπὸν ἐκπέττει δ' ἥττον, εἰ μὴ καὶ πάντα ἀλλὰ γε τὰ ὁμογενῆ, οἷον ἐλάας καὶ

ἀπίου κότινος καὶ ἀχράς. ἅπαντα γὰρ οὕτως, πλὴν εἴ τι σπάνιον, ὥσπερ ἐπὶ τῶν κρανείων καὶ τῶν οὕων· ταῦτα γὰρ δὴ φασι πεπαίτερα καὶ ἡδύτερα τὰ ἄγρια τῶν ἡμέρων εἶναι· καὶ εἰ δὴ τι ἄλλο μὴ προσδέχεται γεωργίαν ἢ δένδρον ἢ καὶ τι τῶν ἐλαττώνων, οἷον τὸ σίλφιον καὶ ἡ κάππαρις καὶ τῶν χεδροπῶν ὁ θέρμος, ἃ καὶ μάλιστα ἂν τις [2] ἄγρια τὴν φύσιν εἴποι. τὸ γὰρ μὴ προσδεχόμενον ἡμέρωσιν, ὥσπερ ἐν τοῖς ζώοις, τοῦτο ἄγριον τῇ φύσει. καίτοι φησὶν Ἰππῶν ἅπαν καὶ ἡμερον καὶ ἄγριον εἶναι, καὶ θεραπευόμενον μὲν ἡμερον μὴ θεραπευόμενον δὲ ἄγριον, τῇ μὲν ὀρθῶς λέγων τῇ δὲ οὐκ ὀρθῶς. ἐξαμελούμενον γὰρ ἅπαν χεῖρον γίνεται καὶ ἀπαγριούται, θεραπευόμενον δὲ οὐχ ἅπαν βέλτιον, ὥσπερ εἴρηται. ὁ δὲ χωριστέον καὶ τὰ μὲν ἄγρια τὰ δ' ἡμερα λεκτέον, ὥσπερ τῶν ζώων τὰ συνανθρωπευόμενα καὶ τὰ δεχόμενα τιθασείαν.

[3] Ἀλλὰ τοῦτο μὲν οὐδὲν ἴσως διαφέρει ποτέρως ρητέον. ἅπαν δὲ τὸ ἐξαγριούμενον τοῖς τε καρποῖς χεῖρον γίνεται καὶ αὐτὸ βραχύτερον καὶ φύλλοις καὶ κλωσὶ καὶ φλοιῷ καὶ τῇ ὅλῃ μορφῇ· καὶ γὰρ πυκνότερα καὶ οὐλότερα καὶ σκληρότερα καὶ ταῦτα καὶ ὅλη ἡ φύσις γίνεται, ὡς ἐν τούτοις μάλιστα τῆς διαφορᾶς τῶν ἡμέρων καὶ τῶν ἀγρίων γινομένης. δι' ὃ καὶ ὅσα τῶν ἡμερουμένων τοιαῦτα τυγχάνει, ταῦτα ἄγριά φασι εἶναι, καθάπερ τὴν πεύκην καὶ τὴν κυπάριττον, ἢ ὅλως ἢ τὴν ἄρρενα, καὶ τὴν καρύαν δὲ καὶ τὴν διοσβάλανον.

[4] Ἔτι τε τῷ φιλόψυχρα καὶ ὀρεινὰ μᾶλλον εἶναι· καὶ γὰρ τοῦτο λαμβάνεται πρὸς τὴν ἀγριότητα τῶν δένδρων καὶ ὅλως τῶν φυτῶν, εἴτ' οὖν καθ' αὐτὸ λαμβανόμενον εἴτε κατὰ συμβεβηκός.

Ὁ μὲν οὖν τῶν ἀγρίων ἀφορισμὸς εἶθ' οὕτως ἢ καὶ ἄλλως ληπτέος, οὐδὲν ἂν ἴσως διενέγκοι πρὸς τὰ νῦν· ἐκεῖνο δὲ ἀληθές, ὥς γε τῷ τύφῳ καὶ ἀπλῶς εἰπεῖν, ὅτι μᾶλλον ὀρεινὰ τὰ ἄγρια καὶ εὐθενεῖ τὰ πλείω καὶ μᾶλλον ἐν τούτοις τοῖς τόποις, ἐὰν μὴ τις λαμβάνῃ τὰ φύλδρα καὶ παραποτάμια καὶ ἀλσώδη. ταῦτα γὰρ καὶ τὰ [5] τοιαῦτα τυγχάνει πεδεινὰ μᾶλλον. οὐ μὴν ἄλλ' ἐν γε τοῖς μεγάλοις ὄρεσιν, οἷον Παρνησῶ τε καὶ Κυλλήνῃ καὶ Ὀλύμπῳ τῷ Πιερικῷ τε καὶ τῷ Μυσίῳ καὶ εἴ που τοιοῦτον ἕτερον, ἅπαντα φύεται διὰ τὴν πολυειδίαν τῶν τόπων· ἔχουσι γὰρ καὶ λιμνώδεις καὶ ἐνύγρους καὶ ξηροὺς καὶ γεώδεις καὶ πετρώδεις καὶ τοὺς ἀνὰ μέσον λειμῶνας καὶ σχεδὸν ὅσαι διαφοραὶ τῆς γῆς· ἐτι δὲ τοὺς μὲν κοίλους καὶ εὐδαινεοὺς τοὺς δὲ μετεώρους καὶ προσσηνέμους· ὥστε δύνασθαι παντοῖα καὶ τὰ ἐν τοῖς πεδίοις φέρειν.

[6] Οὐδὲν δ' ἄτοπον οὐδ' εἰ ἔνια μὴ οὕτω πάμπορα τῶν ὀρῶν, ἀλλ'

ιδιωτέρας τινὸς ὕλης ἢ πάσης ἢ τῆς πλείστης, οἷον ἐν τῇ Κρήτῃ τὰ Ἰδαῖα· κυπάριττος γὰρ ἐκεῖ· καὶ τὰ περὶ Κιλικίαν καὶ Συρίαν, ἐν οἷς κέδρος· ἐνιαχοῦ δὲ τῆς Συρίας τέρμινθος. αἱ γὰρ διαφοραὶ τῆς χώρας τὴν ιδιότητα ποιοῦσιν. ἀλλ' εἴρηται τὸ ἴδιον ὥς ἐπὶ πᾶν.

[3.1] Ἴδια δὲ τὰ τοιαύδε τῶν ὀρεινῶν, ἃ ἐν τοῖς πεδίοις οὐ φύεται, [περὶ τὴν Μακεδονίαν] ἐλάτη πεύκη πίτυς ἀγρία φίλυρα ζυγία φηγὸς πύξος ἀνδράχλη μῖλος ἄρκευθος τέρμινθος ἐρινεὸς φυλὴκη ἀφάρκη καρύα διοσβάλανος πρῖνος. τὰ δὲ καὶ ἐν τοῖς πεδίοις μυρική πετελέα λεύκη ἰτέα αἰγείρος κρανεῖα θηλυκρανεῖα κλήθρα δρυὸς λακάρη ἀχρὰς μηλέα ὀστρὺα κήλαστρον μελία παλίουρος ὀξυάκανθος <σφένδαμνος>· ἦν ἐν μὲν τῷ ὄρει πεφυκυῖαν ζυγίαν καλοῦσιν, ἐν δὲ τῷ πεδίῳ γλεῖνον. οἱ δ' ἄλλως διαιροῦσι καὶ ἕτερον ποιοῦσιν εἶδος σφενδάμνου καὶ ζυγίας.

[2] Ἄπαντα δὲ ὅσα κοινὰ τῶν ὀρῶν καὶ τῶν πεδίων, μείζω μὲν καὶ καλλίω τῇ ὄψει τὰ ἐν τοῖς πεδίοις γίνεται, κρείττω δὲ τῇ χρεῖα τῇ τε τῶν ξύλων καὶ τῇ τῶν καρπῶν τὰ ὀρεινὰ· πλὴν ἀχράδος καὶ ἀπίου καὶ μηλέας· αὗται δ' ἐν τοῖς πεδίοις κρείττους οὐ μόνον τοῖς καρποῖς ἀλλὰ καὶ τοῖς ξύλοις· ἐν γὰρ τοῖς ὄρεσι μικραὶ καὶ ὀζώδεις καὶ ἀκανθώδεις γίνονται· πάντα δὲ καὶ ἐν τοῖς ὄρεσιν, ὅταν ἐπιλάβωνται τῶν οἰκείων τόπων, καὶ καλλίω φύεται καὶ εὐθενεῖ μᾶλλον· ὥς δὲ ἀπλῶς εἰπεῖν τὰ ἐν τοῖς ὁμαλέσι τῶν ὀρῶν καὶ μάλιστα, τῶν δὲ ἄλλων τὰ ἐν τοῖς κάτω καὶ κοίλοις· τὰ δ' ἐπὶ τῶν ἄκρων χεῖριστα, πλὴν εἴ τι τῇ φύσει [3] φιλόψυχρον· ἔχει δὲ καὶ ταῦτ' αὖ τινα διαφορὰν ἐν τοῖς ἀνομοίοις τῶν τόπων, ὑπὲρ ὧν ὕστερον λεκτέον· νῦν δὲ διαιρετέον ἕκαστον κατὰ τὰς διαφορὰς τὰς εἰρημένους.

Αἰφύλλα μὲν οὖν ἐστὶ τῶν ἀγρίων ἃ καὶ πρότερον ἐλέχθη, ἐλάτη πεύκη πίτυς ἀγρία πύξος ἀνδράχλη μῖλος ἄρκευθος τέρμινθος φυλὴκη ἀφάρκη δάφνη φελλόδρυς κήλαστρον ὀξυάκανθος πρῖνος μυρική· τὰ δὲ ἄλλα πάντα φυλλοβολεῖ· πλὴν εἴ τι περιττὸν ἐνιαχοῦ, καθάπερ ἐλέχθη περὶ τῆς ἐν τῇ Κρήτῃ πλατάνου καὶ δρυὸς καὶ εἴ που τόπος τις ὅλως εὐτροφος.

[4] Κάρπιμα δὲ τὰ μὲν ἄλλα πάντα· περὶ δὲ ἰτέας καὶ αἰγείρου καὶ πετελέας, ὥσπερ ἐλέχθη, διαμφισβητοῦσιν. ἔνιοι δὲ τὴν αἰγείρον μόνην ἀκαρπεῖν φασιν, ὥσπερ καὶ οἱ ἐν Ἀρκαδίᾳ, τὰ δὲ ἄλλα πάντα τὰ ἐν τοῖς ὄρεσι καρποφορεῖν. ἐν Κρήτῃ δὲ καὶ αἰγείροι κάρπιμοι πλείους εἰσὶ· μία μὲν ἐν τῷ στομίῳ τοῦ ἄντρου τοῦ ἐν τῇ Ἰδῇ, ἐν ᾧ τὰ ἀναθήματα ἀνάκειται, ἄλλη δὲ μικρὰ πλησίον· ἀπωτέρω δὲ μάλιστα δώδεκα σταδίους περὶ τινα κρήνην Σαύρου καλουμένην πολλάι. εἰσὶ δὲ καὶ ἐν τῷ πλησίον ὄρει τῆς Ἰδῆς ἐν τῷ Κινδρίῳ καλουμένῳ

καὶ περὶ Πραισίαν δὲ ἐν τοῖς ὄρεσιν. οἱ δὲ μόνον τῶν τοιούτων τὴν πετελέαν κάρπιμον εἶναι φασι, καθάπερ οἱ περὶ Μακεδονίαν.

[5] Μεγάλη δὲ διαφορὰ πρὸς καρπὸν καὶ ἄκαρπίαν καὶ ἡ τῶν τόπων φύσις, ὥσπερ ἐπὶ τε τῆς περσέας ἔχει καὶ τῶν φοινίκων· ἡ μὲν ἐν Αἰγύπτῳ καρποφορεῖ καὶ εἴ που τῶν πλησίον τόπων, ἐν Ῥόδῳ δὲ μέχρι τοῦ ἀνθεῖν μόνον ἀφικνεῖται. ὁ δὲ φοῖνιξ περὶ μὲν Βαβυλῶνα θαυμαστός, ἐν τῇ Ἑλλάδι δὲ οὐδὲ πεπαίνει, παρ' ἐνίοις δὲ ὅλως οὐδὲ προφαίνει καρπὸν.

[6] Ὅμοίως δὲ καὶ ἕτερα πλείω τοιαῦτ' ἐστίν· ἐπεὶ καὶ τῶν ἐλαττόνων ποαρίων καὶ ὑλημάτων ἐν τῇ αὐτῇ χώρᾳ καὶ συνόρῳ χώρᾳ τὰ μὲν κάρπιμα τὰ δ' ἄκαρπα γίνεται· καθάπερ καὶ τὸ κενταύριον ἐν τῇ Ἠλείᾳ, τὸ μὲν ἐν τῇ ὀρεινῇ κάρπιμον, τὸ δ' ἐν τῷ πεδίῳ ἄκαρπον ἀλλὰ μόνον ἀνθεῖ, τὸ δ' ἐν τοῖς κοίλοις τόποις οὐδ' ἀνθεῖ πλην κακῶς. δοκεῖ δ' οὖν καὶ τῶν ἄλλων τῶν ὁμογενῶν καὶ ἐν μιᾷ προσηγορίᾳ τὸ μὲν ἄκαρπον εἶναι τὸ δὲ κάρπιμον, οἷον πρῖνος ὁ μὲν κάρπιμος ὁ δ' ἄκαρπος· καὶ [7] κλήθρα δὲ ὡσαύτως· ἀνθεῖ δ' ἄμφω. σχεδὸν δὲ ὅσα καλοῦσιν ἄρρενα τῶν ὁμογενῶν ἄκαρπα· καὶ τούτων τὰ μὲν πολλὰ ἀνθεῖν φασι τὰ δ' ὀλίγον τὰ δ' ὅλως οὐδ' ἀνθεῖν· τὰ δὲ ἀνάπαλιν, τὰ μὲν ἄρρενα μόνον καρποφορεῖν, οὐ μὴν ἄλλ' ἀπὸ γε τῶν ἀνθῶν φύεσθαι τὰ δένδρα, καθάπερ καὶ ἀπὸ τῶν καρπῶν ὅσα κάρπιμα· καὶ ἐν ἀμφοῖν οὕτως ἐνίοτε πυκνὴν εἶναι τὴν ἔκφυσιν ὥστε τοὺς ὀρεοτύπους οὐ δύνασθαι διῆναι μὴ ὁδοποιησαμένους.

[8] Ἀμφισβητεῖται δὲ καὶ περὶ τῶν ἀνθῶν ἐνίων, ὥσπερ εἶπομεν. οἱ μὲν γὰρ καὶ δρυὲς ἀνθεῖν οἶονται καὶ τὴν Ἡρακλεῶτιν καρύαν καὶ διοσβάλανον, ἔτι δὲ πεύκην καὶ πίτυν· οἱ δ' οὐδὲν τούτων, ἀλλὰ τὸν ἱουλον τὸν ἐν ταῖς καρύαις καὶ τὸ βρύον τὸ δρυῖνον καὶ τὸν κύτταρον τὸν πιτύϊνον ὅμοιον καὶ ἀνάλογον εἶναι τοῖς προαποπτῶτοις ἐρινοῖς. οἱ δὲ περὶ Μακεδονίαν οὐδὲ ταυτὰ φασιν ἀνθεῖν ἄρκευθον ὀξύην ἀρίαν σφένδαμνον. ἐνιοὶ δὲ τὰς ἀρκεύθους δύο εἶναι, καὶ τὴν μὲν ἐτέραν ἀνθεῖν μὲν ἄκαρπον δ' εἶναι, τὴν δὲ ἐτέραν οὐκ ἀνθεῖν μὲν καρπὸν δὲ φέρειν εὐθὺς προφαινόμενον, ὥσπερ καὶ τὰς συκᾶς τὰ ἐρινά. συμβαίνει δ' οὖν ὥστε ἐπὶ δύο ἔτη τὸν καρπὸν ἔχειν μόνον τοῦτο τῶν δένδρων. ταῦτα μὲν οὖν ἐπισκεπτέον.

[4.1] Ἡ δὲ βλάστησις τῶν μὲν ἅμα γίνεται καὶ τῶν ἡμέρων, τῶν δὲ μικρὸν ἐπιλειπομένη, τῶν δ' ἤδη πλέον, ἀπάντων δὲ κατὰ τὴν ἡρινὴν ὥραν. ἀλλὰ τῶν καρπῶν ἡ παραλλαγή πλείων· ὥσπερ δὲ καὶ πρότερον εἶπομεν, οὐ κατὰ τὰς βλαστήσεις αἱ πεπάνσεις ἀλλὰ πολὺ διαφέρουσιν· ἐπεὶ καὶ τῶν ὀψικαρποτέρων, ἃ δὴ τινὲς φασιν ἐνιαυτοφορεῖν, οἷον ἄρκευθον καὶ πρῖνον,

ὁμως αἱ βλαστήσεις τοῦ ἥρους. αὐτὰ δ' αὐτῶν τὰ ὁμογενῇ τῷ πρότερον καὶ ὕστερον διαφέρει κατὰ τοὺς τόπους· πρῶτα μὲν γὰρ βλαστάνει τὰ ἐν τοῖς ἔλεσιν, ὡς οἱ περὶ Μακεδονίαν λέγουσι, δεύτερα δὲ τὰ ἐν τοῖς πεδίοις, ἔσχατα δὲ τὰ ἐν τοῖς ὄρεσιν.

[2] Αὐτῶν δὲ τῶν καθ' ἕκαστα δένδρων τὰ μὲν συναναβλαστάνει τοῖς ἡμέροις, οἷον ἀνδράχλη ἀφάρκη· ἀχράς δὲ μικρῷ ὕστερον τῆς ἀπίου. τὰ δὲ καὶ πρὸ ζεφύρου καὶ μετὰ πνοᾶς εὐθὺ ζεφύρου. καὶ πρὸ ζεφύρου μὲν κρानεῖα καὶ θηλυκρानεῖα, μετὰ ζέφυρον δὲ δάφνη κλήθρα, πρὸ ἰσημερίας δὲ μικρὸν φύλυρα ζυγία φηγὸς συκῆ· πρῶτίβλαστα δὲ καὶ καρύα καὶ δρυς καὶ ἀκτέος· ἔτι δὲ μᾶλλον τὰ ἄκαρπα δοκοῦντα καὶ ἀλσώδη, λευκὴ πετελέα ἰτέα αἰγιερός· πλάτανος δὲ μικρῷ ὀψιαίτερον τούτων. τὰ δὲ ἄλλα ὥσπερ ἐνισταμένου τοῦ ἥρους, οἷον ἐρινεὸς φυλὴκη ὀξυάκανθος παλίουρος τέρμινθος καρύα διοσβάλανος· μηλέα δ' ὀψίβλαστος· ὀψιβλαστότατον δὲ σχεδὸν ἵψος ἀρία τετραγωνία θύεια μίλος. αἱ μὲν οὖν βλαστήσεις οὕτως ἔχουσιν.

[3] Αἱ δὲ ἀνθήσεις ἀκολουθοῦσι μὲν ὡς εἰπεῖν κατὰ λόγον, οὐ μὴν ἀλλὰ παραλλάττουσι, μᾶλλον δὲ καὶ ἐπὶ πλέον ἢ τῶν καρπῶν τελείωσις. κρानεῖα μὲν γὰρ ἀποδίδωσι περὶ τροπὰς θερινὰς ἢ πρῶτος σχεδὸν ὥσπερ πρῶτον· ἢ δ' ὀψιος, ἣν δὴ τινες καλοῦσι θηλυκρानεῖαν, μετ' αὐτὸ τὸ μετόπωρον· ἔστι δὲ ὁ ταύτης καρπὸς ἄβρωτος καὶ τὸ ξύλον ἀσθενὲς καὶ χαῦνον· τοσαύτη δὲ διαφορὰ περὶ [4] ἄμφω. τέρμινθος δὲ περὶ πυροῦ ἀμητὸν ἢ μικρῷ ὀψιαίτερον ἀποδίδωσι καὶ μελία καὶ σφένδαμνος τοῦ θέρους τὸν καρπὸν· κλήθρα δὲ καὶ καρύα καὶ ἀχράδων τι γένος μετοπώρου· δρυς δὲ καὶ διοσβάλανος ὀψιαίτερον ἔτι περὶ Πλειάδος δύσιν, ὡσαύτως δὲ καὶ φυλὴκη καὶ πρῖνος καὶ παλίουρος καὶ ὀξυάκανθος μετὰ Πλειάδος δύσιν· ἢ δ' ἀρία χειμῶνος ἀρχομένου· καὶ ἡ μηλέα μὲν τοῖς πρώτοις ψύχεσιν, ἀχράς δὲ ὀψία χειμῶνος· ἀνδράχλη δὲ καὶ ἀφάρκη τὸ μὲν πρῶτον πεπαίνουσιν ἅμα τῷ βότρυϊ περκάζοντι, τὸ δὲ ὕστερον, δοκεῖ γὰρ ταῦτα δίκارπα, ἀρχομένου τοῦ χειμῶνος, ἐλάτῃ δὲ καὶ [5] μίλος ἀνθοῦσι μικρὸν πρὸ ἡλίου τροπῶν· [καὶ τῆς γε ἐλάτης τὸ ἄνθος κρόκινον καὶ ἄλλως καλόν·] τὸν δὲ καρπὸν ἀφιάσι μετὰ δύσιν Πλειάδος. πεύκη δὲ καὶ πίτυς προτεροῦσι τῇ βλαστήσει μικρόν, ὅσον πεντεκαίδεκα ἡμέραις, τοὺς δὲ καρποὺς ἀποδιδόασιν μετὰ Πλειάδα κατὰ λόγον.

Ταῦτα μὲν οὖν μετριωτέραν μὲν ἔχει παραλλαγὴν· πάντων δὲ πλείστην ἡ ἄρκευθος καὶ ἡ κήλαστρος καὶ ἡ πρῖνος· ἢ μὲν γὰρ ἄρκευθος ἐνιαύσιον ἔχειν δοκεῖ· περικαταλαμβάνει γὰρ ὁ νέος τὸν περυσινόν. ὡς δὲ τινὲς φασιν, οὐδὲ πεπαίνει, δι' ὃ καὶ προαφαιροῦσι καὶ χρόνον τινὰ τηροῦσιν· ἐὰν δὲ ἐᾷ [6] ἐπὶ

τοῦ δένδρου τις, ἀποξηραίνεται. φασὶ δὲ καὶ τὴν πρῖνον οἱ περὶ Ἀρκαδίαν ἐνιαυτῷ τελειοῦν· ἅμα γὰρ τὸν ἔνον πεπαίνει καὶ τὸν νέον ὑποφαίνει· ὥστε τοῖς τοιούτοις συμβαίνει συνεχῶς τὸν καρπὸν ἔχειν. φασὶ δὲ γε καὶ τὴν κήλαστρον ὑπὸ τοῦ χειμῶνος ἀποβάλλειν. ὀψικάρπα δὲ σφόδρα καὶ φύλura καὶ πύξος. [τὸν δὲ καρπὸν ἄβρωτον ἔχει παντὶ ζῳῇ φύλura θηλυκρανεῖα πύξος. ὀψικάρπα δὲ καὶ κιττὸς καὶ ἄρκευθος καὶ πεύκη καὶ ἀνδράχλη.] ὥς δὲ οἱ περὶ Ἀρκαδίαν φασίν, ἔτι τούτων ὀψικαρπότερα σχεδὸν δὲ πάντων ὀψιαίτερα τετραγωνία θύεια μίλος. αἱ μὲν οὖν τῶν καρπῶν ἀποβολαὶ καὶ πεπάνσεις τῶν ἀγρίων τοιαύτας ἔχουσι διαφορὰς οὐ μόνον πρὸς τὰ ἡμερα ἀλλὰ καὶ πρὸς ἑαυτά.

[5.1] Συμβαίνει δ' ὅταν ἄρξωνται βλαστάνειν τὰ μὲν ἄλλα συνεχῇ τὴν τε βλάστησιν καὶ τὴν αὔξησιν ποιεῖσθαι, πεύκην δὲ καὶ ἐλάτην καὶ δρῦν διαλείπειν, καὶ τρεῖς ὁρμὰς εἶναι καὶ τρεῖς ἀφιέναι βλαστούς, δι' ὃ καὶ τρῖςλοποι· πᾶν γὰρ δὴ δένδρον ὅταν βλαστάνῃ λοπᾶ· πρῶτον μὲν ἄκρου ἕαρος εὐθὺς ἰσταμένου τοῦ Θαργηλιῶνος, ἐν δὲ τῇ Ἰδῇ περὶ πεντεκαίδεκα μάλιστα ἡμέρας· μετὰ δὲ ταῦτα διαλιπόντα περὶ τριάκοντα ἢ μικρῷ πλείους ἐπιβάλλεται ἄλιν ἄλλους βλαστούς ἀπ' ἄκρας τῆς κορυφήσεως τῆς ἐπὶ τῷ προτέρῳ βλαστῷ· καὶ τὰ μὲν ἄνω τὰ δ' εἰς τὰ πλάγια κύκλῳ ποιεῖται τὴν βλάστησιν, οἷον γόνυ ποιησάμενα τὴν τοῦ πρώτου βλαστοῦ κορύνην, ὥσπερ καὶ ἡ πρώτη βλάστησις ἔχει. γίνεται δὲ τοῦτο περὶ τὸν Σκιρροφοριῶνα λήγοντα.

[2] Κατὰ δὲ ταύτην τὴν βλάστησιν καὶ ἡ κηκὶς φύεται πᾶσα, καὶ ἡ λευκὴ καὶ ἡ μέλαινα· φύεται δὲ ὥς ἐπὶ τὸ πολὺ νυκτὸς ἀθρόος· ἐφ' ἡμέραν δὲ μίαν αὐξηθεῖσα, πλὴν τῆς πιττοειδοῦς, ἐὰν ὑπὸ τοῦ καύματος ληφθῇ ξηραίνεται, καὶ ἀνανυξῆς ἐπὶ τὸ μεῖζον, ἐγίνετο γὰρ ἂν μεῖζον τῷ μεγέθει. διόπερ τινὲς αὐτῶν οὐ μεῖζον ἔχουσι κυάμου τὸ μέγεθος. ἡ δὲ μέλαινα καὶ ἐπὶ πλείους ἡμέρας ἔγχλωρός ἐστι, καὶ αὐξάνονται καὶ λαμβάνουσιν ἔναι μέγεθος μήλου.

Διαλείποντα δὲ μετὰ τοῦτο περὶ πεντεκαίδεκα ἡμέρας ἄλιν τὸ τρίτον ἐπιβάλλεται βλαστούς Ἑκατομβαιῶνος, ἐλαχίστας ἡμέρας τῶν πρότερον· ἴσως γὰρ ἕξ ἢ ἐπτὰ τὸ πλεῖστον· ἡ δὲ βλάστησις ὁμοία καὶ τὸν αὐτὸν τρόπον. παρελθουσῶν δὲ τούτων οὐκέτι εἰς μῆκος ἄλλ' εἰς πάχος ἡ αὐξήσις τρέπεται.

[3] Πᾶσι μὲν οὖν τοῖς δένδροις αἱ βλαστήσεις φανεραί, μάλιστα δὲ τῇ ἐλάτῃ καὶ τῇ πεύκῃ διὰ τὸ στοιχεῖν τὰ γόνυ καὶ ἐξ ἴσου τοὺς ὄζους ἔχειν. ὥρα δὲ καὶ πρὸς τὸ τέμνεσθαι τὰ ξύλα τότε διὰ τὸ λοπᾶν· ἐν γὰρ τοῖς ἄλλοις καιροῖς οὐκ εὐπεριαιρέτος ὁ φλοιός, ἀλλὰ καὶ περιαιρεθέντος μέλαν τὸ ξύλον γίνεται

καὶ τῇ ὄψει χεῖρον· ἐπεὶ καὶ πρὸς γε τὴν χρεῖαν οὐδέν, ἀλλὰ καὶ ἰσχυρότερον, ἐὰν μετὰ τὴν πέπανσιν τῶν καρπῶν τηθῇ.

[4] Ταῦτα μὲν οὖν ἴδια τῶν προειρημένων δένδρων. αἱ δὲ βλαστήσεις αἱ ἐπὶ Κυνὶ καὶ Ἀρκτούρῳ γινόμεναι μετὰ τὴν ἔαρινήν σχεδὸν κοιναὶ πάντων· ἔνδηλοι δὲ μᾶλλον ἐν τοῖς ἡμέροις καὶ τούτων μάλιστα συκῇ καὶ ἀμπέλῳ καὶ ῥοιᾷ καὶ ὅλῳς ὅσα εὐτραφῇ καὶ ὅπου χώρα τοιαύτη· δι' ὃ καὶ τὴν ἐπ' Ἀρκτούρῳ πλείστην φασὶ γίνεσθαι περὶ Θετταλίαν καὶ Μακεδονίαν· ἅμα γὰρ συμβαίνει καὶ τὸ μετόπωρον καλὸν γίνεσθαι καὶ μακρόν, ὥστε καὶ τὴν μαλακότητα συμβάλλεσθαι τοῦ ἀέρος. ἐπεὶ καὶ ἐν Αἰγύπτῳ διὰ τοῦθ' ὡς εἰπεῖν αἰεὶ βλαστάνει τὰ δένδρα, ἢ καὶ μικρόν τινα διαλείπει χρόνον.

[5] Ἀλλὰ τὰ μὲν περὶ τὰς ἐπιβλαστήσεις, ὥσπερ εἴρηται, κοινά, τὰ δὲ περὶ τὰς διαλείψεις ἀπὸ τῆς πρώτης ἴδια τῶν λεχθέντων. ἴδιον δ' ἐνίοις ὑπάρχει καὶ τὸ τῆς καλουμένης κάχρυς, οἷον τοῖς [τε] προειρημένοις· ἔχει γὰρ καὶ ἐλάτη καὶ πεύκη καὶ δρυς, καὶ ἔτι φύλυρα καὶ καρύα καὶ διοσβάλανος καὶ πίτυς. αὗται δὲ γίνονται δρυὶ μὲν πρὸ τῆς βλαστήσεως ὑποφαινούσης τῆς ἡρινῆς ὥρας. ἔστι δ' ὥσπερ εἰς κύησις φυλλικῇ μεταξὺ πίπτουσα τῆς ἐξ ἀρχῆς ἐποιδήσεως καὶ τῆς φυλλικῆς βλαστήσεως· τῇ δ' ὅη ἐστὶ τοῦ μετοπώρου μετὰ τὴν φυλλοβολίαν εὐθὺς λιπαρά τις καὶ ὥσπερ ἐπωδηκυῖα, καταπερανεὶ μέλλουσα βλαστάνειν, καὶ διαμένει τὸν χειμῶνα μέχρι τοῦ ἤρος. ἢ δὲ Ἡρακλεωτικῇ μετὰ τὴν ἀποβολὴν τοῦ καρποῦ φύει τὸ βοτρυῶδες ἡλικὸν σκώληξ εὐμεγέθης, ἐξ ἐνὸς μίσχου πλείω δὴ, ἃ καλοῦσιν οἱ [6] ἰούλους. τούτων ἕκαστον ἐκ μικρῶν σύγκειται μορίων φολιδωτῶν τῇ τάξει, καθάπερ οἱ στρόβιλοι τῆς πεύκης, ὥστε μὴ ἀνομοίαν εἶναι τὴν ὅσιν στροβίλῳ νέφω καὶ χλωρῷ πλὴν προμηκέστερον καὶ σχεδὸν ἰσόπαχος διόλου. τοῦτο δὲ αὖξεται τὸν χειμῶνα· (καὶ ἅμα τῷ ἥρι χάσκει τὰ φολιδωτὰ καὶ ξανθὰ γίνεται), καὶ τὸ μῆκος λαμβάνει καὶ τριδάκτυλον· ὅταν δὲ τοῦ ἤρος τὸ φύλλον βλαστάνῃ, ταῦτ' ἀποπίπτει καὶ τὰ τοῦ καρύου καλυκώδη περικάρπια γίνεται συμμεμυκτά κατὰ τοῦ μίσχου, τοσαῦτα ὅσα καὶ ἦν τὰ ἄνθη· τούτων δ' ἐν ἑκάστῳ κάρυον ἓν. περὶ δὲ τῆς φυλῆρας ἐπισκεπτέον, καὶ εἴ τι ἄλλο καχρυοφόρον.

[6.1] Ἔστι δὲ καὶ τὰ μὲν εὐαυξῇ τὰ δὲ δυσανξῇ. εὐαυξῇ μὲν τὰ τε πάρυδρα, οἷον πετέα πλάτανος λεύκη αἰγείρος ἰτέα· καὶ τοὶ περὶ ταύτης ἀμφισβητοῦσιν οἱ τινες ὡς δυσανξοῦς· καὶ τῶν καρποφόρων δὲ ἐλάτη πεύκη δρυς. εὐαυξέστατον δὲ ... μίλος καὶ λάκαρα φηγὸς ἄρκευθος σφένδαμνος ὅστρυα ζυγία μελία κλήθρα πίτυς ἀνδράχλη κρανεία πύξος ἀχράς. καρποφορεῖ δ'

εὐθὺς ἐλάτη πεύκη πίτυς, κἄν ὀπηλικονοῦν μέγεθος λάβωσιν.

[2] Ἡ δὲ αὐξησις καὶ ἡ βλάστησις τῶν μὲν ἄλλων ἄτακτος κατὰ τοὺς τόπους τῶν βλαστῶν, τῆς δ' ἐλάτης ὠρισμένη καὶ συνεχῆς καὶ ὕστερον. ὅταν γὰρ ἐκ τοῦ στελέχους τὰ πρῶτα σχισθῇ, πάλιν ἐξ ἐκείνου ἢ ἐτέρα σχίσις γίνεται κατὰ τὸν αὐτὸν τρόπον, καὶ τοῦτ' αἰεὶ ποιεῖ κατὰ πάσας τὰς ἐπιβλαστήσεις. ἐν δὲ τοῖς ἄλλοις οὐδ' οἱ ὄζοι κατ' ἀλλήλους πλὴν ἐπὶ τινων ὀλίγων, οἷον κοτίνου καὶ ἄλλων· ἔχει δὲ καὶ τῇδε διαφορὰν ἡ αὐξησις κοινῇ πάντων ὁμοίως ἡμέρων τε καὶ ἀγρίων· τὰ μὲν γὰρ καὶ ἐκ τοῦ ἄκρου τῶν βλαστῶν καὶ ἐκ τῶν πλαγίων φύεται, καθάπερ ἄπιος ῥόα συκῇ μύρρινος σχεδὸν τὰ πλεῖστα· τὰ δ' ἐκ τοῦ ἄκρου μὲν οὐκ ἀνίσχονται ἐκ δὲ τῶν πλαγίων, καὶ αὐτὸ προωθεῖται τὸ ὑπάρχον, ὥσπερ καὶ τὸ ὅλον στέλεχος καὶ οἱ ἀκρεμόνες. συμβαίνει δὲ τοῦτο ἐπὶ τῆς Περσικῆς καρύας καὶ τῆς Ἡρακλεωτικῆς καὶ [3] ἄλλων. ἀπάντων δὲ τῶν τοιούτων εἰς ἓν φύλλον ἀποτελεωτῶσιν οἱ βλαστοί, δι' ὃ καὶ εὐλόγως οὐκ ἐπιβλαστάνει καὶ αὐξάνεται μὴ ἔχοντα ἀρχήν. (ὁμοία δὲ τρόπον τινὰ ἡ αὐξησις καὶ τοῦ σίτου· καὶ γὰρ οὗτος αἰεὶ τῇ προώσει τοῦ ὑπάρχοντος αὐξάνεται, κἄν κολοβωθῇ τὰ φύλλα, καθάπερ ἐν τοῖς ἐπιβοσκομένοις· πλὴν οὗτός γε οὐκ ἐκ τοῦ πλαγίου παραφύει, καθάπερ ἓν τῶν χεδροπῶν.) αὕτη μὲν οὖν διαφορὰ τις ἂν εἴη βλαστήσεως ἅμα καὶ αὐξήσεως.

[4] Βαθύρριζα δὲ οὐ φασί τινες εἶναι τὰ ἄγρια διὰ τὸ φύεσθαι πάντα ἀπὸ σπέρματος, οὐκ ἄγαν ὀρθῶς λέγοντες. ἐνδέχεται γὰρ ὅταν ἐμβιώσῃ πόρρω καθίεναι τὰς ρίζας· ἐπεὶ καὶ τῶν λαχάνων τὰ πολλὰ τοῦτο ποιεῖ, καίπερ ἀσθενέστερα ὄντα καὶ ἐναργῶς φυόμενα <ἐν> τῇ γῇ. βαθυρριζότατον δ' οὖν δοκεῖ τῶν ἀγρίων εἶναι ἡ πρῖνος· ἐλάτη δὲ καὶ πεύκη μετρίως, ἐπιπολαιότατον δὲ θραύπαλος καὶ κοκκυμηλέα καὶ σποδιάς· αὕτη δ' ἐστὶν ὥσπερ ἀγρία κοκκυμηλέα. ταῦτα μὲν οὖν καὶ ὀλιγόρριζα· ὁ δὲ θραύπαλος πολύρριζον. συμβαίνει δὲ τοῖς ἄλλοις τοῖς μὴ κατὰ βάθους ἔχουσι, καὶ οὐχ ἥκιστα ἐλάτη καὶ πεύκη, προρρίζουσι ὑπὸ τῶν πνευμάτων ἐκπίπτειν.

[5] Οἱ μὲν οὖν περὶ Ἀρκαδίαν οὕτω λέγουσιν. οἱ δ' ἐκ τῆς Ἰδης βαθυρριζότερον ἐλάτην δρυὸς ἄλλ' ἐλάττους ἔχειν καὶ εὐθυρριζοτέραν εἶναι· βαθυρριζότατον δὲ καὶ τὴν κοκκυμηλέαν καὶ τὴν Ἡρακλεωτικὴν, τὰς δὲ ρίζας λεπτὰς καὶ ἰσχυρὰς τὴν Ἡρακλεωτικὴν, τὴν δὲ κοκκυμηλέαν πολύρριζον, ἄμφω δ' ἐμβιῶναι δεῖν· δυσώλεθρον δὲ τὴν κοκκυμηλέαν. ἐπιπολῆς δὲ σφένδαμνον καὶ ὀλίγας· τὴν δὲ μελίαν πλείους καὶ εἶναι πυκνόρριζον καὶ βαθύρριζον. ἐπιπολῆς δὲ καὶ ἄρκευθον καὶ κέδρον· καὶ κλήθρας λεπτὰς καὶ ὁμαλεῖς· ἔτι δ' ὀξύην· καὶ γὰρ τοῦτ' ἐπιπολαιόρριζον καὶ ὀλιγόρριζον. τὴν δὲ

οὐαν ἐπιπολαίους μὲν ἰσχυράς δὲ καὶ παχείας καὶ δυσωλέθρους πλήθει δὲ μετρίας. βαθύρριζα μὲν οὖν καὶ οὐ βαθύρριζα τὰ τοιαῦτ' ἐστίν.

[7.1] Ἀποκοπέντος δὲ τοῦ στελέχους τὰ μὲν ἄλλα πάνθ' ὥς εἶπειν παραβλαστάνει, πλὴν ἐὰν αἱ ῥίζαι πρότερον τύχωσι πεπονηκυῖαι· πεύκη δὲ καὶ ἐλάτη τελέως ἐκ ῥιζῶν αὐτοετείς αὐαίνονται καὶ ἐὰν τὸ ἄκρον ἐπικοπῇ. συμβαίνει δὲ ἴδιόν τι περὶ τὴν ἐλάτην· ὅταν γὰρ κοπῇ ἢ κολουσθῇ ὑπὸ πνεύματος ἢ καὶ ἄλλου τινὸς περὶ τὸ λείον τοῦ στελέχους - ἔχει γὰρ μέχρι τινὸς λείον καὶ ἄοζον καὶ ὁμαλὸν ἱκανὸν ἴστω πλοίου - περιφέρεται μικρόν, ὑποδεέστερον εἰς ὕψος, καὶ καλοῦσιν οἱ μὲν ἄμφαυξιν οἱ δὲ ἀμφίφυαν, τῷ μὲν χρώματι μέλαν τῇ δὲ σκληρότητι ὑπερβάλλον, ἐξ οὗ τοὺς κρατῆρας ποιοῦσιν οἱ περὶ Ἀρκαδίαν· [2] τὸ δὲ πάχος οἶον ἂν τύχη τὸ δένδρον, ὅσῳ περ ἂν ἰσχυρότερον καὶ ἐγγυλότερον ἢ παχύτερον. συμβαίνει δὲ καὶ ἐκεῖνο ἴδιον ἐν ταύτῳ τούτῳ περὶ τὴν ἐλάτην· ὅταν μὲν γὰρ τις τοὺς ὄζους ἅπαντας ἀφελὼν ἀποκόψῃ τὸ ἄκρον, ἀποθνήσκει ταχέως· ὅταν δὲ τὰ κατωτέρω τὰ κατὰ τὸ λείον ἀφέλῃ, ζῇ τὸ κατάλοιπον, περὶ δὲ καὶ ἡ ἀμφαυξὶς φύεται. ζῇ δὲ δῆλον ὅτι τῷ ἐγγυλὸν εἶναι καὶ χλωρόν, εἴπερ ἀπαράβλαστον. ἀλλὰ γὰρ τοῦτο μὲν ἴδιον τῆς ἐλάτης.

[3] Φέρει δὲ τὰ μὲν ἄλλα τὸν τε καρπὸν τὸν ἑαυτῶν καὶ τὰ κατ' ἐνιαυτὸν ἐπιγινόμενα ταῦτα, φύλλον ἄνθος βλαστὸν· τὰ δὲ καὶ βρύον ἢ ἔλικα· τὰ δὲ πλείω, καθάπερ ἢ τε πετέα τὸν τε βότρυν καὶ τὸ θυλακῶδες τοῦτο, καὶ συκὴ καὶ τὰ ἐρινὰ τὰ προαποπίπτοντα καὶ εἴ τινας ἄρα τῶν συκῶν ὀλυνθοφοροῦσιν· ἴσως δὲ τρόπον τινὰ καρπὸς οὗτος. ἀλλ' ἢ Ἡρακλεωτικὴ καρύα τὸν ἰούλον καὶ ἢ πρῖνος τὸν φοινικοῦν κόκκον ἢ δὲ δάφνη τὸ βότρυον. φέρει μὲν καὶ ἡ καρποφόρος, εἰ μὴ καὶ πᾶσα ἀλλὰ τοι γένος τι αὐτῆς, οὐ μὴν ἀλλὰ πλέον ἢ ἄκαρπος, ἣν δὲ καὶ ἄρρενά τινας καλοῦσιν. ἀλλ' ἢ πεύκη τὸν προαποπίπτοντα κύτταρον.

[4] Πλεῖστα δὲ πάντων ἢ δρυὶς παρὰ τὸν καρπὸν, οἶον τὴν τε κηκίδα τὴν μικρὰν καὶ τὴν ἐτέραν τὴν πιττώδη μέλαιναν. ἔτι δὲ συκαμινῶδες ἄλλο τῇ μορφῇ πλὴν σκληρόν καὶ δυσκάτακτον, σπάνιον δὲ τοῦτο· καὶ ἕτερον αἰδοιώδη σχέσιν ἔχον, τελειούμενον δ' ἔτι σκληρόν κατὰ τὴν ἐπανάστασιν καὶ τετρυπημένον· προσεμφερὲς τρόπον τινὰ τοῦτ' ἐστὶ καὶ ταύρου κεφαλῇ, περικαταγνύμενον δὲ ἐνδοθεν ἔχει πυρῆνος ἐλάας ἰσοφυές. φύει δὲ καὶ τὸν ὑπ' ἐνίων καλούμενον πῖλον· τοῦτο δ' ἐστὶ σφαιρίον ἐριῶδες μαλακὸν περὶ πυρήνιον σκληρότερον πεφυκός, ᾧ χρῶνται πρὸς τοὺς λύχνους· καίεται γὰρ καλῶς, ὥσπερ καὶ ἡ μέλαινα κηκίς. φύει δὲ καὶ ἕτερον σφαιρίον κόμην ἔχον,

τὰ μὲν ἄλλα ἀρχεῖον, κατὰ δὲ τὴν ἐαρινὴν ὥραν ἐπίβαπτον χυλῷ μελιτηρῷ καὶ κατὰ τὴν ἀφὴν καὶ κατὰ τὴν γεῦσιν.

[5] Παραφύει δ' ἐνδοτέρω τῆς τῶν ῥαβδῶν μασχαλίδος ἕτερον σφαιρίον ἄμισχον ἢ καὶ κοιλόμισχον ἴδιον καὶ ποικίλον· τοὺς μὲν γὰρ ἐπανεστηκότας ὀμφαλοὺς ἐπιλεύκους ἢ ἐπεστιγμένους ἔχει μέλανας τὸ δ' ἀνὰ μέσον κοκκοβαφεὺς καὶ λαμπρόν· ἀνοιγόμενον δ' ἐστὶ μέλαν καὶ ἐπίσαπρον. σπάνιον δὲ παραφύει καὶ λιθάριον κισσηροειδὲς ἐπὶ πλεῖον. ἔτι δ' ἄλλο τοῦτου σπανιάτερον φυλλικὸν συμπεπιλημένον πρόμηκες σφαιρίον. ἐπὶ δὲ τοῦ φύλλου φύει κατὰ τὴν ῥάχιν σφαιρίον λευκὸν διαυγὲς ὕδατῶδες, ὅταν ἀπαλὸν ἦ· τοῦτο δὲ καὶ μύας ἐνίοτε ἐνδὸν ἴσχει. τελειούμενον δὲ σκληρύνεται κηκίδος μικρᾶς λείας τρόπον.

[6] Ἡ μὲν οὖν δρυὶς τοσαῦτα φέρει παρὰ τὸν καρπὸν. οἱ γὰρ μύκητες ἀπὸ τῶν ρίζων καὶ παρὰ τὰς ρίζας φυόμενοι κοινοὶ καὶ ἐτέρων εἰσίν. ὡσαύτως δὲ καὶ ἡ ἰξία· καὶ γὰρ αὕτη φύεται καὶ ἐν ἄλλοις· ἀλλ' οὐδὲν ἦττον, ὥσπερ ἐλέχθη, πλειστοφόρον ἐστίν· εἰ δέ γε δὴ καθ' Ἡσίοδον φέρει μέλι καὶ μελίττας, ἔτι μᾶλλον· φαίνεται δ' οὖν καὶ ὁ μελιτώδης οὗτος χυλὸς ἐκ τοῦ ἀέρος ἐπὶ ταύτῃ μάλιστα προσίζειν. φασὶ δὲ καὶ ὅταν κατακαυθῇ γίνεσθαι λίτρον ἐξ αὐτῆς. ταῦτα μὲν οὖν ἴδια τῆς δρυὸς.

[8.1] Πάντων δέ, ὥσπερ ἐλέχθη, τῶν δένδρων ὡς καθ' ἕκαστον γένος λαβεῖν διαφορὰ πλείους εἰσίν· ἢ μὲν κοινὴ πᾶσιν, ἢ διαιροῦσι τὸ θῆλυ καὶ τὸ ἄρρεν, ὧν τὸ μὲν καρποφόρον τὸ δὲ ἄκαρπον ἐπὶ τινων. ἐν οἷς δὲ ἄμφω καρποφόρα τὸ θῆλυ καλλικαρπότερον καὶ πολυκαρπότερον· πλὴν ὅσοι ταῦτα καλοῦσιν ἄρρενα, καλοῦσι γὰρ τινες. παραπλησία δ' ἡ τοιαύτη διαφορὰ καὶ ὡς τὸ ἡμερον διήρηται πρὸς τὸ ἄγριον. ἐτέρα δὲ καθ' εἶδος αὐτῶν τῶν ὁμογενῶν· ὑπὲρ ὧν λεκτέον ἅμα συνεμφαίνοντας καὶ τὰς ἰδίας μορφὰς τῶν μὴ φανερῶν καὶ γνωρίμων.

[2] Δρυὸς δὲ γένη - ταύτην γὰρ μάλιστα διαιροῦσι· καὶ ἐνιοί γε εὐθύς τὴν μὲν ἡμερον καλοῦσι τὴν δ' ἄγριαν οὐ τῇ γλυκύτητι τοῦ καρποῦ διαιροῦντες· ἐπεὶ γλυκύτατός γε ὁ τῆς φηγοῦ, ταύτην δ' ἄγριαν ποιοῦσιν· ἀλλὰ τῷ μᾶλλον ἐν τοῖς ἐργασίμοις φύεσθαι καὶ τὸ ξύλον ἔχειν λειότερον, τὴν δὲ φηγὸν τραχὺ καὶ ἐν τοῖς ὀρεινοῖς - γένη μὲν οὖν οἱ μὲν τέτταρα ποιοῦσιν οἱ δὲ πέντε. διαλλάττουσι δ' ἔνια τοῖς ὀνόμασιν, οἷον τὴν τὰς γλυκείας φέρουσιν οἱ μὲν ἡμερίδα καλοῦντες οἱ δ' ἐτυμόδρυν. ὁμοίως δὲ καὶ ἐπ' ἄλλων. ὡς δ' οὖν οἱ περὶ τὴν Ἰδὴν διαιροῦσι, τάδ' ἐστὶ τὰ εἶδη· ἡμερὶς αἰγίλωψ πλατύφυλλος φηγὸς ἀλίφλοιος· οἱ δὲ εὐθύφλοιον καλοῦσιν. κάρπιμα μὲν πάντα· γλυκύτατα

δὲ τὰ τῆς φηγοῦ, καθάπερ εἴρηται, καὶ δεύτερον τὰ τῆς ἡμερίδος, ἔπειτα τῆς πλατυφύλλου, καὶ τέταρτον ἢ ἀλίφλοιος, ἔσχατον δὲ [3] καὶ πικρότατον ἢ αἰγίλωψ. οὐχ ἅπασαι δὲ γλυκεῖαι ἐν τοῖς γένεσιν ἀλλ' ἐνίοτε καὶ πικραί, καθάπερ ἢ φηγός. διαφέρουσι δὲ καὶ τοῖς μεγέθεσι καὶ τοῖς σχήμασι καὶ τοῖς χρώμασι τῶν βαλάνων. ἴδιον δὲ ἔχουσιν ἢ τε φηγός καὶ ἢ ἀλίφλοιος· ἀμφοτέραι γὰρ παραλιθάζουσιν ἐν τοῖς ἄρρεσι καλουμένοις ἐξ ἄκρων τῶν βαλάνων ἐκατέρωθεν, αἱ μὲν πρὸς τῷ κεύφει αἱ δὲ πρὸς αὐτῇ τῇ σαρκί. δι' ὃ καὶ ἀφαιρεθέντων ὅμοια γίνεται κοιλώματα τοῖς ἐπὶ τῶν ζώων.

[4] Διαφέρουσι δὲ καὶ τοῖς φύλλοις καὶ τοῖς στελέχεσι καὶ τοῖς ξύλοις καὶ τῇ ὅλῃ μορφῇ. ἢ μὲν γὰρ ἡμερίς οὐκ ὀρθοφυῆς οὐδὲ λεία οὐδὲ μακρά· περίκομος γὰρ ἢ φυτεία καὶ ἐπεστραμμένη καὶ πολυμάσχαλος, ὥστε ὀζώδη καὶ βραχεῖαν γίνεσθαι· τὸ δὲ ξύλον ἰσχυρὸν μὲν ἀσθενέστερον δὲ τῆς φηγοῦ· τοῦτο γὰρ ἰσχυρότατον καὶ ἀσαπέστατον. οὐκ ὀρθοφυῆς δὲ οὐδ' αὕτη ἀλλ' ἦττον ἔτι τῆς ἡμερίδος, τὸ δὲ στέλεχος παχύτατον, ὥστε καὶ τὴν ὅλην μορφήν βραχεῖαν εἶναι· καὶ γὰρ ἢ φυτεία περίκομος καὶ ταύτη καὶ οὐκ εἰς ὀρθόν. ἢ δὲ αἰγίλωψ ὀρθοφυέστατον καὶ ὑψηλότατον καὶ λειότατον καὶ τὸ ξύλον εἰς μῆκος ἰσχυρότατον. οὐ φύεται δὲ ἐν τοῖς ἐργασίμοις ἢ σπανίως.

[5] Ἡ δὲ πλατύφυλλος δεύτερον ὀρθοφυῖα καὶ μήκει, πρὸς δὲ τὴν χρείαν τὴν οἰκοδομικὴν χερίστον μετὰ τὴν ἀλίφλοιοι, φαῦλον δὲ καὶ εἰς τὸ καίειν καὶ ἀνθρακεύειν, ὥσπερ καὶ τὸ τῆς ἀλίφλοιου, καὶ θριπηδέστατον μετ' ἐκείνην· ἢ γὰρ ἀλίφλοιος παχὺ μὲν ἔχει τὸ στέλεχος χαῦνον δὲ καὶ κοῖλον ἐὰν ἔχη πάχος ὡς ἐπὶ τὸ πολὺ, δι' ὃ καὶ ἀχρεῖον εἰς τὰς οἰκοδομάς· ἔτι δὲ σήπεται τάχιστα· καὶ γὰρ ἐνυγρόν ἐστι τὸ δένδρον· δι' ὃ καὶ κοίλη γίνεται. φασὶ δὲ τινες οὐδ' ἐγκάρδιον εἶναι μόνῃ. λέγουσιν ὡς καὶ κεραυνοβλήτες αὐται μόναι γίνονται καίπερ ὕψος οὐκ ἔχουσαι τῶν Αἰολέων τινές, οὐδὲ πρὸς τὰ ἱερὰ χρῶνται τοῖς ξύλοις. κατὰ μὲν οὖν τὰ ξύλα καὶ τὰς ὅλας μορφὰς ἐν τούτοις αἱ διαφοραί.

[6] Κηκίδας δὲ πάντα φέρει τὰ γένη, μόνῃ δὲ εἰς τὰ δέρματα χρησίμην ἢ ἡμερίς. ἢ δὲ τῆς αἰγίλωπος καὶ τῆς πλατυφύλλου τῇ μὲν ὅψει παρομοία τῇ τῆς ἡμερίδος, πλὴν λειοτέρα, ἀχρεῖος δέ. φέρει καὶ τὴν ἐτέραν τὴν μέλαιναν ἢ τὰ ἔρια βάπτουσιν. ὃ δὲ καλοῦσί τινες φάσκον ὅμοιον τοῖς ρακίοις ἢ αἰγίλωψ μόνῃ φέρει πολὺν καὶ τραχύ· καὶ γὰρ πηχυαῖον κατακρεμάννυται, καθάπερ τρύχος ὀθονίου μακρόν. φύεται δὲ τοῦτο ἐκ τοῦ φλοιοῦ καὶ οὐκ ἐκ τῆς κορύνης ὅθεν ἢ βάλανος, οὐδ' ἐξ ὀφθαλμοῦ ἀλλ' ἐκ τοῦ πλαγίου τῶν ἄνωθεν ὀζων. ἢ δ' ἀλίφλοιος ἐπίμελαν τοῦτο φύει καὶ βραχύ.

[7] Οἱ μὲν οὖν ἐκ τῆς Ἰδης οὕτως διαιροῦσιν. οἱ δὲ περὶ Μακεδονίαν τέτταρα γένη ποιοῦσιν, ἐτυμόδρυν ἢ τὰς γλυκείας, πλατύφυλλον ἢ τὰς πικράς, φηγὸν ἢ τὰς στρογγύλας, ἄσπριν· ταύτην δὲ οἱ μὲν ἄκαρπον ὅλως οἱ δὲ φαῦλον τὸν καρπὸν, ὥστε μηδὲν ἐσθίειν ζῶον πλὴν ὑός, καὶ ταύτην ὅταν ἐτέραν μὴ ἔχη· καὶ τὰ πολλὰ λαμβάνεσθαι περικεφαλαία. μοχθηρὰ δὲ καὶ τὰ ξύλα· πελεκηθέντα μὲν ὅλως ἀχρεῖα· καταρῆγγνυται γὰρ καὶ διαπίπτει· ἀπελέκητα δὲ βελτίω, δι' ὃ καὶ οὕτω χρῶνται. μοχθηρὰ δὲ καὶ εἰς καῦσιν καὶ εἰς ἀνθρακείαν· ἀχρεῖος γὰρ ὅλως ὁ ἀνθραξ διὰ τὸ πηδᾶν καὶ σπινθηρίζειν πλὴν τοῖς χαλκεῦσι. τούτοις δὲ χρησιμώτερος τῶν ἄλλων· διὰ γὰρ τὸ ἀποσβέννυσθαι, ὅταν παύσῃται φυσώμενος, ὀλίγος ἀναλίσκεται. [τὸ δὲ τῆς ἀλιφλοίου χρήσιμον εἰς τοὺς ἄξονας μόνον καὶ τὰ τοιαῦτα.] δρυὸς μὲν οὖν ταύτας ποιοῦσι τὰς ἰδέας.

[9.1] Τῶν δὲ ἄλλων ἐλάττους· καὶ σχεδὸν τά γε πλεῖστα διαιροῦσι ἄρρενι καὶ θήλει, καθάπερ εἴρηται, πλὴν ὀλίγων ὧν ἐστὶ καὶ ἡ πεύκη· πεύκης γὰρ τὸ μὲν ἡμερον ποιοῦσι τὸ δ' ἄγριον, τῆς δ' ἀγρίας δύο γένη· καλοῦσι δὲ τὴν μὲν Ἰδαίαν τὴν δὲ παραλίαν· τούτων δὲ ὀρθότερα καὶ μακροτέρα καὶ τὸ φύλλον ἔχουσα παχύτερον ἢ Ἰδαία, τὸ δὲ φύλλον λεπτότερον καὶ ἀμενηνότερον ἢ παραλία καὶ λειότερον τὸν φλοιὸν καὶ εἰς τὰ δέρματα χρήσιμον· ἡ δὲ ἐτέρα οὐ. καὶ τῶν στροβίλων ὁ μὲν τῆς παραλίας στρογγύλος τε καὶ διαχάσκων ταχέως, ὁ δὲ τῆς Ἰδαίας μακρότερος καὶ χλωρὸς καὶ ἥττον χάσκων ὥς ἂν ἀγριώτερος· τὸ δὲ ξύλον ἰσχυρότερον τὸ τῆς παραλίας· δεῖ γὰρ καὶ τὰς τοιαύτας διαφορὰς λαμβάνειν τῶν συγγενῶν· γνώριμοι γὰρ διὰ τὴν χρεῖαν.

[2] Ὀρθότερον δὲ καὶ παχύτερον, ὥσπερ εἵπομεν, ἡ Ἰδαία, καὶ πρὸς τούτοις πιττωδέστερον ὅλως τὸ δένδρον, μελαντέρα δὲ πίττη καὶ γλυκυτέρα καὶ λεπτοτέρα καὶ εὐωδესτέρα, ὅταν ἦ ὥμή· ἐψηθεῖσα δὲ χεῖρων ἐκβαίνει διὰ τὸ πολλὸν ἔχειν τὸν ὀρρόν. εἰόκασι δ' ἅπερ οὗτοι διαιροῦσιν ὀνόμασιν ἰδίους οἱ ἄλλοι διαιρεῖν τῷ ἄρρενι καὶ θήλει. φασὶ δ' οἱ περὶ Μακεδονίαν καὶ ἄκαρπὸν τι γένος ὅλως εἶναι πεύκης, καὶ τὸ μὲν ἄρρεν βραχύτερόν τε καὶ σκληροφυλλότερον, τὸ δὲ θῆλυ εὐμηκέστερον, καὶ τὰ φύλλα λιπαρὰ καὶ ἀπαλὰ καὶ κεκλιμένα μᾶλλον ἔχειν· ἔτι δὲ τὰ ξύλα τῆς μὲν ἄρρενος περιμήτρα καὶ σκληρὰ καὶ ἐν ταῖς ἐργασίαις στρεφόμενα, τῆς δὲ θηλείας εὐεργὰ καὶ ἀστραβῇ καὶ μαλακώτερα.

[3] Σχεδὸν δὲ κοινὴ τις ἡ διαφορὰ πάντων τῶν ἄρρένων καὶ θηλειῶν, ὥς οἱ ὑλοτόμοι φασίν. ἅπαν γὰρ τὸ ἄρρεν τῇ πελεκήσει καὶ βραχύτερον καὶ ἐπεστραμμένον μᾶλλον καὶ δυσεργότερον καὶ τῷ χρώματι μελάντερον, τὸ δὲ

θήλυ εὐμηκέστερον· ἐπεὶ καὶ τὴν αἰγίδα τὴν καλουμένην ἢ θήλειαν τῆς πεύκης ἔχει· τοῦτο δ' ἐστὶ τὸ ἐγκάρδιον αὐτῆς· αἴτιον δὲ ὅτι ἀπευκοτέρα καὶ ἥττον ἔνδαδος καὶ λειοτέρα καὶ εὐκτεανωτέρα. γίνεται δὲ ἐν τοῖς μέγεθος ἔχουσι τῶν δένδρων, ὅταν ἐκπεσόντα περισαπῇ τὰ λευκὰ τὰ κύκλω. τούτων γὰρ περιαιρεθέντων καὶ καταλειφθείσης τῆς μήτρας ἐκ ταύτης πελεκᾶται· ἔστι δὲ εὐχρουν σφόδρα καὶ λεπτοῖνον. ὁ δὲ οἱ περὶ τὴν Ἰδὴν δαδουργοὶ καλοῦσι συκῆν, τὸ ἐπιγινόμενον ἐν ταῖς πεύκαις, ἐρυθρότερον τὴν χροίαν τῆς δαδός, ἐν τοῖς ἄρρεσιν ἐστὶ μᾶλλον· δυσῶδες δὲ τοῦτο καὶ οὐκ ὄζει δαδός οὐδὲ καίεται ἀλλ' ἀποπηδᾷ ἀπὸ τοῦ πυρός.

[4] Πεύκης μὲν οὖν ταῦτα γένη ποιοῦσιν, ἡμερόν τε καὶ ἄγριον, καὶ τῆς ἀγρίας ἄρρενά τε καὶ θήλειαν καὶ τρίτην τὴν ἄκαρπον. οἱ δὲ περὶ τὴν Ἀρκαδίαν οὔτε τὴν ἄκαρπον λέγουσιν οὔτε τὴν ἡμερον πεύκην, ἀλλὰ πίτυν εἶναι φασί· καὶ γὰρ τὸ στέλεχος ἐμφερέστατον εἶναι τῇ πίτυϊ καὶ ἔχειν τὴν τε λεπτότητα καὶ τὸ μέγεθος καὶ ἐν ταῖς ἐργασίαις ταῦτό τὸ ξύλον· τὸ γὰρ τῆς πεύκης καὶ παχύτερον καὶ λειότερον καὶ ὑψηλότερον εἶναι· καὶ τὰ φύλλα τὴν μὲν πεύκην ἔχειν πολλὰ καὶ λιπαρὰ καὶ βαθέα καὶ κεκλιμένα, τὴν δὲ πίτυν καὶ τὴν κωνοφόρον ταύτην ὀλίγα τε καὶ αὐχμωδέστερα καὶ πεφρικότα μᾶλλον· «ἄμφω δὲ τριχόφυλλα.» ἔτι δὲ τὴν πίτταν ἐμφερεστέραν τῆς πίτυος· καὶ γὰρ τὴν πίτυν ἔχειν ὀλίγην τε καὶ πικράν, ὥσπερ καὶ τὴν κωνοφόρον, τὴν δὲ πεύκην εὐώδη καὶ πολλήν. φύεται δ' ἐν μὲν τῇ Ἀρκαδίᾳ ἢ πίτυς ὀλίγη περὶ δὲ τὴν Ἠλείαν πολλή. οὗτοι μὲν οὖν ὅλῳ τῷ γένει διαμφισβητοῦσιν.

[5] Ἡ δὲ πίτυς δοκεῖ τῆς πεύκης καὶ διαφέρειν τῷ λιπαρωτέρῳ τε εἶναι καὶ λεπτοφυλλοτέρα καὶ τὸ μέγεθος ἐλάττων καὶ ἥττον ὀρθοφυής· ἔτι δὲ τὸν κῶνον ἐλάττω φέρειν καὶ πεφρικότα μᾶλλον καὶ τὸ κάρυον πιττωδέστερον· καὶ τὰ ξύλα λευκότερα καὶ ὁμοιότερα τῇ ἐλάτῃ καὶ τὸ ὅλον ἄπευκα. διαφορὰν δ' ἔχει καὶ ταύτην μεγάλην πρὸς τὴν πεύκην· πεύκην μὲν γὰρ ἐπικαυθεῖσθαι τῶν ρίζων οὐκ ἀναβλαστάνειν, τὴν πίτυν δὲ φασὶ τινες ἀναβλαστάνειν, ὥσπερ καὶ ἐν Λέσβῳ ἐμψησθέντος τοῦ Πυρραίων ὄρους τοῦ πιτυώδους. νόσημα δὲ ταῖς πεύκαις τοιοῦτόν τι λέγουσι συμβαίνειν οἱ περὶ τὴν Ἰδὴν ὥσθ', ὅταν μὴ μόνον τὸ ἐγκάρδιον ἀλλὰ καὶ τὸ ἔξω τοῦ στελέχους ἔνδαδον γένηται, τηνικαῦτα ὥσπερ ἀποπνίγεσθαι. τοῦτο δὲ αὐτόματον συμβαίνει δι' εὐτροφίαν τοῦ δένδρου, ὡς ἂν τις εἰκάσειεν· ὅλον γὰρ γίνεται δάς· περὶ μὲν οὖν τὴν πεύκην ἴδιον τοῦτο πάθος.

[6] Ἐλάτῃ δ' ἐστὶν ἡ μὲν ἄρρην ἡ δὲ θήλειαν, διαφορὰς δ' ἔχουσα τοῖς φύλλοις· ὀξύτερα γὰρ καὶ κεντητικώτερα τὰ τοῦ ἄρρενος καὶ ἐπεστραμμένα

μᾶλλον, δι' ὃ καὶ οὐλότερον τῇ ὄψει φαίνεται τὸ δένδρον ὅλον. καὶ τῷ ξύλῳ· λευκότερον γὰρ καὶ μαλακώτερον καὶ εὐεργέστερον τὸ τῆς θηλείας καὶ τὸ ὅλον στέλεχος εὐμηκέστερον· τὸ δὲ τοῦ ἄρρενος ποικιλώτερον καὶ παχύτερον καὶ σκληρότερον καὶ περιμήτηρον μᾶλλον ὅλως δὲ φαυλότερον τὴν ὄψιν. ἐν δὲ τῷ κώνῳ τῷ μὲν τοῦ ἄρρενός ἐστι κάρυα ὀλίγα ἐπὶ τοῦ ἄκρου, τῷ δὲ τῆς θηλείας ὅλως οὐδέν, ὥς οἱ ἐκ Μακεδονίας ἔλεγον. ἔχει δὲ πτέρυγας τὸ φύλλον καὶ ἐπ' ἑλάττον, ὥστε τὴν ὅλην μορφήν εἶναι θολοειδῇ καὶ παρόμοιον μάλιστα ταῖς Βοιωταῖς κυνέαις· πυκνὸν δὲ οὕτως ὥστε μήτε χιόνα διῦέναι μήθ' ὑέτόν. ὅλως δὲ καὶ τῇ ὄψει τὸ δένδρον καλόν· καὶ γὰρ ἡ βλάστησις ἰδίαις, ὥσπερ εἴρηται, παρὰ τὰς ἄλλας καὶ μόνη τάξιν ἔχουσα· τῷ δὲ μεγέθει μέγα καὶ πολὺ τῆς πεύκης εὐμηκέστερον.

[7] Διαφέρει δὲ καὶ κατὰ τὸ ξύλον οὐ μικρόν· τὸ μὲν γὰρ τῆς ἐλάτης ἰνῶδες καὶ μαλακὸν καὶ κοῦφον, τὸ δὲ τῆς πεύκης δαδῶδες καὶ βαρὺ καὶ σαρκωδέστερον. ὅζους δὲ ἔχει πλείους μὲν ἢ πεύκη σκληροτέρους δ' ἢ ἐλάτη, σχεδὸν δὲ πάντων ὥς εἰπεῖν σκληροτέρους, τὸ δὲ ξύλον μαλακώτερον. ὅλως δὲ οἱ ὅζοι πυκνότατοι καὶ στερεώτατοι μόνον οὐ διαφανεῖς ἐλάτης καὶ πεύκης καὶ τῷ χρώματι δαδῶδεις καὶ μάλιστα διάφοροι τοῦ ξύλου, μᾶλλον δὲ τῆς ἐλάτης. ἔχει δέ, ὥσπερ ἡ πεύκη τὴν αἰγίδα, καὶ ἡ ἐλάτη τὸ λευκὸν λοῦσσον καλούμενον, οἷον ἀντίστροφον τῇ αἰγίδι, πλὴν τὸ μὲν λευκὸν ἢ δ' αἰγίς εὐχρως διὰ τὸ ἐνδαδον. πυκνὸν δὲ καὶ λευκὸν γίνεται καὶ καλὸν ἐκ τῶν πρεσβυτέρων ἤδη δένδρων· ἀλλὰ σπάνιον τὸ χρηστόν, τὸ δὲ τυχὸν δαψιλές, ἐξ οὗ τά τε τῶν ζωγράφων πινάκια ποιοῦσι καὶ τὰ γραμματεῖα τὰ πολλὰ· τὰ δ' ἐσπουδασμένα ἐκ τοῦ βελτίονος.

[8] Οἱ δὲ περὶ Ἀρκαδίαν ἀμφότερα καλοῦσιν αἰγίδα καὶ τὴν τῆς πεύκης καὶ τὴν τῆς ἐλάτης, καὶ εἶναι πλείω τὴν τῆς ἐλάτης ἀλλὰ καλλίω τὴν τῆς πεύκης· εἶναι γὰρ τῆς μὲν ἐλάτης πολλήν τε καὶ λειάν καὶ πυκνήν, τῆς δὲ πεύκης ὀλίγην, τὴν μέντοι οὗσαν οὐλοτέραν καὶ ἰσχυροτέραν καὶ τὸ ὅλον καλλίω. οὗτοι μὲν οὖν εἰκόασιν τοῖς ὀνόμασι διαφωνεῖν. ἡ δὲ ἐλάτη ταύτας ἔχει τὰς διαφορὰς πρὸς τὴν πεύκην καὶ ἔτι τὴν περὶ τὴν ἄμφανξιν, ἣν πρότερον εἵπομεν.

[10.1] Ὅξυι δ' οὐκ ἔχει διαφορὰς ἀλλ' ἐστὶ μονογενές· ὀρθοφυές δὲ καὶ λεῖον καὶ ἄνοζον καὶ πάχος καὶ ὕψος ἔχον σχεδὸν ἴσον τῇ ἐλάτῃ· καὶ τᾶλλα δὲ παρόμοιον [τε] τὸ δένδρον· ξύλον δὲ εὐχρουν ἰσχυρὸν εὖνινον καὶ φλοιὸν λεῖον καὶ παχύν, φύλλον δ' ἀσχιδές προμηκέστερον ἀπίου καὶ ἐπακάνθιζον ἐξ ἄκρου, ρίζας οὔτε πολλὰς οὔτε κατὰ βάθους· ὁ δὲ καρπὸς λεῖος βαλανώδης ἐν

ἐξίνῳ πλὴν [οὐκ] ἀνακάνθῳ καὶ λείῳ, καὶ οὐχ ὥς ἡ διοσβάλανος ἀκανθῶδει, προσεμφερῆς δὲ καὶ κατὰ γλυκύτητα καὶ κατὰ τὸν χυλὸν ἐκείνῳ. γίνεται δὲ καὶ ἐν τῷ ὄρει λευκή, ἥ καὶ χρήσιμον ἔχει τὸ ξύλον πρὸς πολλὰ· καὶ γὰρ πρὸς ἀμαξουργίαν καὶ πρὸς κλινοπηγίαν καὶ εἰς διφρουργίαν καὶ εἰς τραπεζίαν καὶ εἰς ναυπηγίαν· ἡ δ' ἐν τοῖς πεδίοις μέλαινα καὶ ἄχρηστος πρὸς ταῦτα· τὸν δὲ καρπὸν ἔχουσι παραπλήσιον.

[2] Μονογενῆς δὲ καὶ ἡ μίλος, ὀρθοφυῆς δὲ καὶ εὐαυξῆς καὶ ὁμοία τῇ ἐλάτῃ, πλὴν οὐχ ὑψηλὸν οὕτω, πολυμάσχαλον δὲ μᾶλλον. ὅμοιον δὲ καὶ τὸ φύλλον ἔχει τῇ ἐλάτῃ, λιπαρώτερον δὲ καὶ μαλακώτερον. τὸ δὲ ξύλον ἢ μὲν ἐξ Ἀρκαδίας μέλαν καὶ φοινικοῦν, ἡ δ' ἐκ τῆς Ἰδῆς ξανθὸν σφόδρα καὶ ὅμοιον τῇ κέδρῳ, δι' ὃ καὶ τοὺς πωλοῦντάς φασιν ἐξαπατᾶν ὡς κέδρον πωλοῦντας· πᾶν γὰρ εἶναι καρδίαν, ὅταν ὁ φλοιὸς περιαιρεθῇ· ὅμοιον δὲ καὶ τὸν φλοιὸν ἔχειν καὶ τῇ τραχύτητι καὶ τῷ χρώματι τῇ κέδρῳ, ρίζας δὲ μικρὰς καὶ λεπτάς καὶ ἐπιπολαίους. σπάνιον δὲ τὸ δένδρον περὶ τὴν Ἰδην, περὶ δὲ Μακεδονίαν καὶ Ἀρκαδίαν πολὺ· καὶ καρπὸν φέρει στρογγύλον μικρῷ μείζω κυάμου, τῷ χρώματι δ' ἐρυθρὸν καὶ μαλακόν· φασὶ δὲ τὰ μὲν λόφουρα εἶναι φάγη τῶν φύλλων ἀποθνήσκειν, τὰ δὲ μηρυκάζοντα οὐδὲν πάσχειν. τὸν δὲ καρπὸν ἐσθίουσι καὶ τῶν ἀνθρώπων τινὲς καὶ ἔστιν ἡδὺς καὶ ἀσίνη.

[3] Ἔστι δὲ καὶ ἡ ὄστρυς μονοειδής, ἣν καλοῦσιν τινες ὄστρυν, ὁμοφυῆς τῇ ὀξύᾳ τῇ τε φυτεῖα καὶ τῷ φλοιῷ· φύλλα δὲ ἀπιοειδῆ τῷ σχήματι, πλὴν προμηκέστερα πολλῶ καὶ εἰς ὀξὺ συνηγμένα καὶ μείζω, πολὺῖνα δέ, ἀπὸ τῆς μέσης εὐθείας καὶ μεγάλης τῶν ἄλλων πλευροειδῶς κατατεινουσῶν καὶ πάχος ἔχουσῶν· ἔτι δὲ ἐρρυτιδωμένα κατὰ τὰς ἵνας καὶ χαραγμὸν ἔχοντα κύκλῳ λεπτόν· τὸ δὲ ξύλον σκληρὸν καὶ ἄχρουν, ἔκλευκον· καρπὸν δὲ μικρὸν πρόμακρον ὅμοιον κριθῇ ξανθόν· ρίζας δὲ ἔχει μετεώρους· ἔνυδρον δὲ καὶ φαραγγῶδες. λέγεται δὲ ὡς οὐκ ἐπιτήδειον εἰς οἰκίαν εἰσφέρειν· δυσθανατεῖν γὰρ φασὶ καὶ δυστοκεῖν οὗ ἂν ᾖ.

[4] Τῆς δὲ φιλύρας ἢ μὲν ἄρρην ἐστὶ ἡ δὲ θήλεια· διαφέρουσι δὲ τῇ μορφῇ τῇ ὅλῃ καὶ τῇ τοῦ ξύλου καὶ τῷ τὸ μὲν εἶναι κάρπιμον τὸ δ' ἄκαρπον. τὸ μὲν γὰρ τῆς ἄρρενος ξύλον σκληρὸν καὶ ξανθὸν καὶ ὀζωδέστερον καὶ πυκνότερόν ἐστι, ἔτι δ' εὐωδέστερον, τὸ δὲ τῆς θηλείας λευκότερον. καὶ ὁ φλοιὸς τῆς μὲν ἄρρενος παχύτερος καὶ περιαιρεθεὶς ἀκαμπῆς διὰ τὴν σκληρότητα, τῆς δὲ θηλείας λεπτότερος καὶ εὐκαμπής, ἐξ οὗ τὰς κίστας ποιοῦσιν· καὶ ἡ μὲν ἄκαρπος καὶ ἀνανθής, ἡ δὲ θήλεια καὶ ἄνθος ἔχει καὶ καρπόν· τὸ μὲν ἄνθος καλυκῶδες παρὰ τὸν τοῦ φύλλου μίσχον καὶ παρὰ τὴν εἰς νέωτα κάχρυν ἐφ'

ἐτέρου μίσχου, χλοερὸν δὲ ὅταν ἦ καλυκῶδες, ἐκκαλυπτόμενον δὲ ἐπίζανθον·
[5] ἡ δὲ ἄνθησις ἅμα τοῖς ἡμέροις. ὁ δὲ καρπὸς στρογγύλος πρόμακρος ἡλίκος
κύαμος ὅμοιος τῷ τοῦ κιττοῦ, γωνίας ἔχων ὁ ἄδρὸς πέντε οἶον ἰνῶν
ἐξεχουσῶν καὶ εἰς ὁξὺ συναγομένων· ὁ δὲ μὴ ἄδρὸς ἀδιαρθρότερος·
διακνιζόμενος δὲ ὁ ἄδρὸς ἔχει μίkr' ἅττα καὶ λεπτὰ σπερμάτια ἡλικά καὶ ὁ
τῆς ἀδραφάξυος. τὸ δὲ φύλλον καὶ ὁ φλοιὸς ἡδέα καὶ γλυκέα· τὴν δὲ μορφήν
κιττῶδες τὸ φύλλον, πλὴν ἐκ προσαγωγῆς μᾶλλον ἢ περιφέρεια, κατὰ τὸ πρὸς
τῷ μίσχῳ κυρτότατον, ἀλλὰ κατὰ μέσον εἰς ὁξύτερον τὴν συναγωγήν ἔχον καὶ
μακρότερον, ἔπουλον δὲ κύκλῳ καὶ κεχαρᾶγμένον. μήτραν δ' ἔχει τὸ ξύλον
μικρὰν καὶ οὐ πολὺ μαλακωτέραν τοῦ ἄλλου· μαλακὸν γὰρ καὶ τὸ ἄλλο
ξύλον.

[11.1] Τῆς δὲ σφενδάμνου, καθάπερ εἵπομεν, δύο γένη ποιοῦσιν, οἱ δὲ τρία·
ἐν μὲν δὴ τῷ κοινῷ προσαγορεύουσι σφένδαμνον, ἕτερον δὲ ζυγίαν, τρίτον δὲ
κλινότροχον, ὥς οἱ περὶ Στάγειρα. διαφορὰ δ' ἐστὶ τῆς ζυγίας καὶ τῆς
σφενδάμνου ὅτι ἡ μὲν σφένδαμνος λευκὸν ἔχει τὸ ξύλον καὶ εὐινότερον, ἡ δὲ
ζυγία ξανθὸν καὶ οὖλον· τὸ δὲ φύλλον εὐμέγεθες ἅμφω, τῇ σχίσει ὅμοιον τῷ
τῆς πλατάνου τετανὸν λεπτότερον δὲ καὶ ἀσαρκότερον καὶ μαλακώτερον καὶ
προμηκέστερον· τὰ δὲ σχίσμαθ' ὅλα τ' εἰς ὁξὺ συνήκοντα καὶ οὐχ οὕτω
μεσοσχιδῇ ἀλλ' ἀκροσχιδέστερα· οὐ πολὺίνα δὲ ὥς κατὰ μέγεθος. ἔχει δὲ καὶ
φλοιὸν μικρῷ τραχύτερον τοῦ τῆς φιλύρας, ὑποπέλιον παχὺν καὶ πυκνότερον
ἢ ὁ τῆς πίτυος καὶ ἀκαμπῇ· ῥίζαι δ' ὀλίγαι καὶ μετέωροι καὶ οὖλαι σχεδὸν αἰ
πλεῖσται [2] καὶ αἰ τῆς ξανθῆς καὶ αἰ τῆς λευκῆς. γίνεται δὲ μάλιστα ἐν τοῖς
ἐφύδροις, ὥς οἱ περὶ τὴν Ἰδὴν λέγουσι, καὶ ἔστι σπάνιον. περὶ ἄνθους δὲ οὐκ
ἤδεσαν· τὸν δὲ καρπὸν οὐ λίαν μὲν προμήκη, παρόμοιον δὲ τῷ παλιούρῳ
πλὴν προμηκέστερον. οἱ δ' ἐν τῷ Ὀλύμπῳ τὴν μὲν ζυγίαν ὄρειον μᾶλλον, τὴν
δὲ σφένδαμνον καὶ ἐν τοῖς πεδίοις φύεσθαι· εἶναι δὲ τὴν μὲν ἐν τῷ ὄρει
φυομένην ξανθὴν καὶ εὐχρουν καὶ οὖλην καὶ στερεάν, ἥ καὶ πρὸς τὰ πολυτελεῖ
τῶν ἔργων χρῶνται, τὴν δὲ πεδεινὴν λευκὴν τε καὶ μανοτέρα καὶ ἥττον
οὖλην· καλοῦσι δ' αὐτὴν ἔνιοι γλεῖνον, οὐ σφένδαμνον. ... καὶ τῆς ἄρρενος
οὐλότερα τὰ ξύλα συνεστραμμένα, καὶ ἐν τῷ πεδίῳ ταύτην φύεσθαι μᾶλλον
καὶ βλαστάνειν πρωΐτερον.

[3] Ἔστι δὲ καὶ μελίας γένη δύο. τούτων δ' ἡ μὲν ὑψηλὴ καὶ εὐμήκης ἐστὶ
τὸ ξύλον ἔχουσα λευκὸν καὶ εὐνικὸν καὶ μαλακώτερον καὶ ἀνοξότερον καὶ
οὐλότερον· ἡ δὲ ταπεινότερα καὶ ἥττον εὐανξῆς καὶ τραχυτέρα καὶ
σκληροτέρα καὶ ξανθοτέρα. τὰ δὲ φύλλα τῷ μὲν σχήματι δαφνοειδῇ,

πλατυφύλλου δάφνης, εἰς ὀξύτερον δὲ συνηγμένα, χαραγμὸν δὲ τιν' ἔχοντα κύκλῳ καὶ ἐπακανθίζοντα· τὸ δὲ ὅλον, ὅπερ εἶποι τις ἂν φύλλον τῷ ἅμα φυλλορροεῖν, ἀφ' ἐνὸς μίσχου· καὶ περὶ μίαν οἶον ἵνα κατὰ γόνυ καὶ συζυγίαν τὰ φύλλα καθ' ἕκαστον ἐπέφυκε, συχνῶν διεχουσῶν τῶν συζυγιῶν, ὁμοίως καὶ ἐπὶ τῆς οἴης. ἔστι δὲ τῶν μὲν βραχέα τὰ γόνατα καὶ αἱ συζυγίαι τὸ πλῆθος ἐλάττους, τῶν δὲ τῆς λευκῆς καὶ μακρὰ καὶ πλείους· καὶ τὰ καθ' ἕκαστον φύλλα μακρότερα καὶ στενότερα, τὴν δὲ χροάν πρᾶσώδη. φλοιὸν δὲ λεῖον ἔχει, καπυρὸν δὲ καὶ λεπτὸν καὶ τῇ [4] χροᾷ πυρρὸν. πυκνόρριζον δὲ καὶ παχύρριζον καὶ μετέωρον. καρπὸν δὲ οἱ μὲν περὶ τὴν Ἰδίην οὐχ ὑπελάμβανον ἔχειν οὐδ' ἄνθος· ἔχει δ' ἐν λοβῷ λεπτῷ καρπὸν καρυηρὸν ὥς τῶν ἀμυγδαλῶν ὑπόπικρον τῇ γεύσει. φέρει δὲ καὶ ἕτερ' ἅττα οἶον βρύα, καθάπερ ἡ δάφνη, πλὴν στιφρότερα· καὶ ἕκαστον καθ' αὐτὸ σφαιροειδές, ὥσπερ τὰ τῶν πλατάνων· τούτων δὲ τὰ μὲν περὶ τὸν καρπὸν, τὰ δ' ἀπηρητμένα πολὺ, καὶ τὰ πλείστα οὕτω. φύεται δὲ ἡ μὲν λεῖα περὶ τὰ βαθυάγκη μάλιστα καὶ ἔφυδρα, ἡ δὲ τραχεῖα καὶ περὶ τὰ ξηρὰ καὶ πετρώδη. ἔνιοι δὲ καλοῦσι τὴν μὲν μελίαν τὴν δὲ βουμέλιον, ὥσπερ οἱ περὶ Μακεδονίαν.

[5] μεῖζον δὲ καὶ μανότερον ἡ βουμέλιος, δι' ὃ καὶ ἦττον οὖλον. φύσει δὲ τὸ μὲν πεδεινὸν καὶ τραχύ, τὸ δ' ὀρεινὸν καὶ λεῖον· ἔστι δὲ ἡ μὲν ἐν τοῖς ὄρεσι φυομένη εὐχρους καὶ λεῖα καὶ στερεὰ καὶ γλίσχρα, ἡ δ' ἐν τῷ πεδίῳ ἄχρους καὶ μανὴ καὶ τραχεῖα. (τὸ δ' ὅλον ὥς εἰπεῖν τὰ δένδρα ὅσα καὶ ἐν τῷ πεδίῳ καὶ ἐν τῷ ὄρει φύεται, τὰ μὲν ὀρεινὰ εὐχροᾷ τε καὶ στερεὰ καὶ λεῖα γίνεται, καθάπερ ὀξύη πετέα τὰ ἄλλα· τὰ δὲ πεδεινὰ μανότερα καὶ ἀχρούστερα καὶ χεῖρω, πλὴν ἀπίου καὶ μηλέας καὶ ἀχράδος, ὥς οἱ περὶ τὸν Ὀλυμπόν φασι· ταῦτα δ' ἐν τῷ πεδίῳ κρείττω καὶ τῷ καρπῷ καὶ τοῖς ξύλοις· ἐν μὲν γὰρ τῷ ὄρει τραχεῖς καὶ ἀκανθώδεις καὶ ὀζώδεις εἰσὶν, ἐν δὲ τῷ πεδίῳ λειότεροι καὶ μεῖζους καὶ τὸν καρπὸν ἔχουσι γλυκύτερον καὶ σαρκωδέστερον· μεγέθει δὲ αἰεὶ μεῖζω τὰ πεδεινὰ.)

[12.1] Κρανείας δὲ τὸ μὲν ἄρρεν τὸ δὲ θῆλυ, ἣν δὴ καὶ θηλυκρανείαν καλοῦσιν. ἔχουσι δὲ φύλλον μὲν ἀμυγδαλῇ ὅμοιον, πλὴν λιπωδέστερον καὶ παχύτερον, φλοιὸν δ' ἰνώδη λεπτόν· τὸ δὲ στέλεχος οὐ παχὺ λίαν, ἀλλὰ παραφύει ράβδους ὥσπερ ἄγνος· ἐλάττους δὲ ἡ θηλυκρανεία καὶ θαμνωδέστερόν ἐστιν. τοὺς δὲ ὄζους ὁμοίως ἔχουσιν ἅμφω τῇ ἄγνῳ καὶ κατὰ δύο καὶ κατ' ἀλλήλους· τὸ δὲ ξύλον τὸ μὲν τῆς κρανείας ἀκάρδιον καὶ στερεὸν ὅλον, ὅμοιον κέρατι τὴν πυκνότητα καὶ τὴν ἰσχύν, τὸ δὲ τῆς θηλυκρανείας ἐντεριώνην ἔχον καὶ μαλακώτερον καὶ κοιλαινόμενον· [2] δι' ὃ

καὶ ἀχρεῖον εἰς τὰ ἀκόντια. τὸ δ' ὕψος τοῦ ἄρρενος δώδεκα μάλιστα πηχέων, ἡλικία τῶν σαρισσῶν ἡ μεγίστη· τὸ γὰρ ὅλον στέλεχος ὕψος οὐκ ἴσχει. φασὶ δ' οἱ μὲν ἐν τῇ Ἰδῇ τῇ Τρωάδι τὸ μὲν ἄρρεν ἄκαρπον εἶναι τὸ δὲ θῆλυ κάρπιμον. πυρῆνα δ' ὁ καρπὸς ἔχει παραπλήσιον ἐλάα, καὶ ἐσθιόμενος γλυκὺς καὶ εὐώδης· ἄνθος δὲ ὁμοιον τῷ τῆς ἐλάας, καὶ ἀπανθεῖ δὲ καὶ καρποφορεῖ τὸν αὐτὸν τρόπον τῷ ἐξ ἐνὸς μίσχου πλείους ἔχειν, σχεδὸν δὲ καὶ τοῖς χρόνοις παραπλησίως. οἱ δ' ἐν Μακεδονίᾳ καρποφορεῖν μὲν ἄμφω φασὶν τὸν δὲ τῆς θηλείας ἄβρωτον εἶναι· τὰς ρίζας δ' ὁμοίας ἔχει ταῖς ἄγνοις ἰσχυρὰς καὶ ἀνωλέθρους. γίνεται δὲ καὶ περὶ τὰ ἔφυδρα καὶ οὐκ ἐν τοῖς ξηροῖς μόνον· φύεται δὲ καὶ ἀπὸ σπέρματος καὶ ἀπὸ παρασπάδος.

[3] Κέδρον δὲ οἱ μὲν φασιν εἶναι διττὴν, τὴν μὲν Λυκίαν τὴν δὲ Φοινικὴν, οἱ δὲ μονοειδῆ, καθάπερ οἱ ἐν τῇ Ἰδῇ. παρόμοιον δὲ τῇ ἄρκεύθῳ, διαφέρει δὲ μάλιστα τῷ φύλλῳ· τὸ μὲν γὰρ τῆς κέδρου σκληρὸν καὶ ὀξὺ καὶ ἀκανθῶδες, τὸ δὲ τῆς ἄρκεύθου μαλακώτερον· δοκεῖ δὲ καὶ ὑψηλοφυέστερον εἶναι ἢ ἄρκευθος· οὐ μὴν ἄλλ' ἐνιοί γε οὐ διαιροῦσι τοῖς ὀνόμασιν ἄλλ' ἄμφω καλοῦσι κέδρους, πλὴν παρασήμεως τὴν κέδρον ὀξύκεδρον. ὀζώδη δ' ἄμφω καὶ πολυμάσχαλα καὶ ἐπεστραμμένα ἔχοντα τὰ ξύλα· μήτραν δ' ἡ μὲν ἄρκευθος ἔχει μικρὰν καὶ πυκνὴν καὶ ὅταν κοπῇ ταχὺ σηπομένην· ἡ δὲ κέδρος τὸ πλεῖστον ἐγκάρδιον καὶ ἀσαπές, ἐρυθροκάρδια δ' ἄμφω· καὶ ἡ μὲν τῆς [4] κέδρου εὐώδης ἡ δὲ τῆς ἐτέρας οὐ. καρπὸς δ' ὁ μὲν τῆς κέδρου ξανθὸς μύρτου μέγεθος ἔχων εὐώδης ἡδὺς ἐσθίεσθαι. ὁ δὲ τῆς ἄρκεύθου τὰ μὲν ἄλλα ὅμοιος, μέλας δὲ καὶ στρυφνὸς καὶ ὥσπερ ἄβρωτος· διαμένει δ' εἰς ἐνιαυτόν, εἴθ' ὅταν ἄλλος ἐπιφυῇ ὁ περυσινὸς ἀποπίπτει. ὥς δὲ οἱ ἐν Ἀρκαδίᾳ λέγουσι, τρεῖς ἅμα καρποὺς ἴσχει, τὸν τε περυσινὸν οὐπω πέποντα καὶ τὸν προπερύσινον ἤδη πέποντα καὶ ἐδώδιμον καὶ τρίτον τὸν νέον ὑποφαίνει. ἔφη δὲ Σάτυρος καὶ κομίσει τοὺς ὀρεοτύπους αὐτῷ ἀνανθεῖς ἄμφω. τὸν δὲ φλοιὸν ὁμοιον ἔχει κυπαρίττῳ τραχύτερον δέ· ρίζας δὲ μανὰς ἀμφότεραι καὶ ἐπιπολαίους. φύονται περὶ τὰ πετρώδη καὶ χειμέρια καὶ τούτους τοὺς τόπους ζητοῦσι.

[5] Μεσπίλης δ' ἐστὶ τρία γένη, ἀνθηδὼν σατάνειος ἀνθηδονοειδῆς, ὥς οἱ περὶ τὴν Ἰδὴν διαιροῦσι. φέρει δὲ ἡ μὲν σατάνειος τὸν καρπὸν μεῖζω καὶ λευκότερον καὶ χαυνότερον καὶ τοὺς πυρῆνας ἔχοντα μαλακωτέρους· αἱ δ' ἑτεराὶ ἐλάττω τέ τι καὶ εὐωδέστερον καὶ στρυφνότερον, ὥστε δύνασθαι πλείω χρόνον θησαυρίζεσθαι. πυκνότερον δὲ καὶ τὸ ξύλον τούτων καὶ ξανθότερον, τὰ δ' ἄλλα ὅμοιον. τὸ δ' ἄνθος πασῶν ὁμοιον ἀμυγδαλῇ, πλὴν οὐκ ἐρυθρόν

ὥσπερ ἐκεῖνο ἀλλ' ἐγγλωρότερον ... μεγέθει μέγα τὸ δένδρον καὶ περίκομον. φύλλον δὲ τὸ μὲν ἐπὶ ... πολυσχιδὲς δὲ καὶ ἐν ἄκρῳ σελινοειδές, τὸ δ' ἐπὶ τῶν παλαιότερων πολυσχιδὲς σφόδρα καὶ ἐγγωνοειδὲς μείζοσι σχίσμασι, τετανὼν ἰνῶδες λεπτότερον σελίνου καὶ προμηκέστερον καὶ τὸ ὅλον καὶ τὰ σχίσματα, περικεχαραγμένον δὲ ὅλον· μίσχον δ' ἔχει λεπτὸν μακρόν· πρὸ τοῦ φυλλορροεῖν δ' ἐρυθραίνεται σφόδρα. πολύρριζον δὲ τὸ δένδρον καὶ βαθύρριζον· δι' ὃ καὶ χρόνιον καὶ δυσώλεθρον. καὶ τὸ ξύλον ἔχει πυκνὸν καὶ [6] στερεὸν καὶ ἀσαπές. φύεται δὲ καὶ ἀπὸ σπέρματος καὶ ἀπὸ παρασπάδος. νόσημα δὲ αὐτῶν ἐστὶν ὥστε γηράσκοντα σκωληκόβρωτα γίνεσθαι· καὶ οἱ σκώληκες μεγάλοι καὶ ἴδιοι ἢ οἱ ἐκ τῶν δένδρων τῶν ἄλλων.

Τῶν δ' οἰῶν δύο γένη ποιοῦσι, τὸ μὲν δὴ καρποφόρον θῆλυ τὸ δὲ ἄρρεν ἄκαρπον· οὐ μὴν ἀλλὰ διαφέρουσι τοῖς καρποῖς, τῷ τὰς μὲν στρογγύλον τὰς δὲ προμήκη τὰς δ' ὠοειδῇ φέρειν. διαφέρουσι δὲ καὶ τοῖς χυλοῖς· ὥς γὰρ ἐπὶ τὸ πᾶν εὐωδέστερα καὶ γλυκύτερα τὰ στρογγύλα, τὰ δ' ὠοειδῇ πολλακίς ἐστὶν ὀξέα καὶ ἥττον [7] εὐώδη. φύλλα δ' ἀμφοῖν κατὰ μίσχον μακρόν ἰνοειδῇ πεφύκασι στοιχηδὸν ἐκ τῶν πλαγίων πτερυγοειδῶς, ὥς ἐνὸς ὄντος τοῦ ὅλου λοβοὺς δὲ ἔχοντος ἐσχισμένους ἕως τῆς ἰνός· πλὴν διεστᾶσιν ἀφ' ἑαυτῶν ὑπόσυχον τὰ κατὰ μέρος· φυλλοβολεῖ δὲ οὐ κατὰ μέρος ἀλλὰ ὅλον ἅμα τὸ πτερυγῶδες. εἰσὶ δὲ περὶ μὲν τὰ παλαιότερα καὶ μακρότερα πλείους αἱ συζυγίαι, περὶ δὲ τὰ νεώτερα καὶ βραχύτερα ἐλάττους, πάντων δὲ ἐπ' ἄκρου τοῦ μίσχου φύλλον περιττόν, ὥστε καὶ πάντ' εἶναι περιττά. τῷ δὲ σχήματι δαφνοειδῇ τῆς λεπτοφύλλου, πλὴν χαραγμὸν ἔχοντα καὶ βραχύτερα καὶ οὐκ εἰς ὀξὺ τὸ ἄκρον συνῆκον ἀλλ' εἰς περιφερέστερον. ἄνθος δὲ ἔχει βοτρυῶδες ἀπὸ μιᾶς κορύνης ἐκ πολλῶν μικρῶν καὶ [8] λευκῶν συγκείμενον. καὶ ὁ καρπὸς ὅταν εὐκαρπῇ βοτρυώδης· πολλὰ γὰρ ἀπὸ τῆς αὐτῆς κορύνης, ὥστ' εἶναι καθάπερ κηρίον. σκωληκόβορος ἐπὶ τοῦ δένδρου ὁ καρπὸς ἄπεπτος ὢν ἔτι γίνεται μᾶλλον τῶν μεσπίλων καὶ ἀπίων καὶ ἀχράδων· καίτοι πολὺ στρυφνότατος. γίνεται δὲ καὶ αὐτὸ τὸ δένδρον σκωληκόβρωτον καὶ οὕτως αὐαίνεται γηράσκον· καὶ ὁ σκώληξ ἴδιος ἐρυθρὸς δασύς. καρποφορεῖ δ' ἐπιεικῶς νέα· τριετὴς γὰρ εὐθὺς φύει. τοῦ μετοπώρου δ' ὅταν ἀποβάλῃ τὸ φύλλον, εὐθὺς ἴσχει τὴν καχυρῶδη κορύνην λιπαρὰν καὶ ἐπωδηκυῖαν ὥσαν ἤδη βλαστικόν, καὶ διαμένει [9] τὸν χειμῶνα. ἀνάκανθον δὲ ἐστὶ καὶ ἡ οἴη καὶ ἡ μεσπίλη· φλοιὸν δ' ἔχει λεῖον ὑπολίπαρον, ὅσαπερ μὴ γεράνδρυν, τὴν δὲ χροάν ξανθὸν ἐπιλευκαίνοντα· τὰ δὲ γεράνδρυν τραχὺν καὶ μέλανα. τὸ δὲ δένδρον εὐμέγεθες ὀρθοφυὲς εὐρυθμον τῇ κόμῃ· σχεδὸν γὰρ ὥς ἐπὶ τὸ πολὺ

στροβιλοειδές σχῆμα λαμβάνει κατὰ τὴν κόμην, ἐὰν μὴ τι ἐμποδίσῃ. τὸ δὲ ξύλον στερεὸν πυκνὸν ἰσχυρὸν εὐχρουν, ρίζας δὲ οὐ πολλὰς μὲν οὐδὲ κατὰ βάθους, ἰσχυρὰς δὲ καὶ παχείας καὶ ἀνωλέθρους ἔχει. φύεται δὲ καὶ ἀπὸ ρίζης καὶ ἀπὸ παρασπάδος καὶ ἀπὸ σπέρματος· τόπον δὲ ζητεῖ ψυχρὸν ἔνικμον, φιλόζωνον δ' ἐν τούτῳ καὶ δυσώλεθρον· οὐ μὴν ἀλλὰ καὶ φύεται ἐν τοῖς ὄρεσιν.

[13.1] Ἴδιον δὲ τῇ φύσει δένδρον ὁ κέρασός ἐστι· μεγέθει μὲν μέγα· καὶ γὰρ εἰς τέτταρας καὶ εἴκοσι πῆχεις· ἔστι δ' ὀρθοφυὲς σφόδρα· πάχος δὲ ὥστε καὶ δίπηχυν τὴν περίμετρον ἀπὸ τῆς ρίζης ἔχειν. φύλλον δ' ὅμοιον τῷ τῆς μεσπίλης σκληρὸν δὲ σφόδρα καὶ παχύτερον, ὥστε τῇ χροίᾳ πόρρωθεν φανερὸν εἶναι τὸ δένδρον. φλοιὸν δὲ τὴν λειότητα καὶ τὴν χροάν καὶ τὸ πάχος ὅμοιον φυλύρα, δι' ὃ καὶ τὰς κίστας ἐξ αὐτοῦ ποιοῦσιν ὥσπερ καὶ ἐκ τοῦ τῆς φυλύρας. περιπέφυκε δὲ οὗτος οὔτε ὀρθοφυῆς οὔτε κύκλῳ κατ' ἴσον, ἀλλ' ἐλικηδὸν περιεῖληφε κάτωθεν ἄνω προσάγων, ὥσπερ ἡ διαγραφὴ τῶν φύλλων· καὶ λοπιζόμενος οὗτος ἐκδέρεται, ἐκεῖνος δ' ἐπίτομος [2] γίνεται καὶ οὐ δύναται· μέρος δ' αὐτοῦ τι τὸν αὐτὸν τρόπον ἀφαιρεῖται κατὰ πάχος σχιζόμενον λεπτὸν ὡς ἂν φύλλον, τὸ δὲ λοιπὸν προσμένειν τε δύναται καὶ σώζει τὸ δένδρον ὡσαύτως περιπεφυκός. περιαιρουμένου δὲ ὅταν λοπᾷ τοῦ φλοιοῦ συνεκραίνει καὶ τότε τὴν ὑγρότητα· καὶ ὅταν ὁ ἔξω χιτῶν περιαιρεθῇ, μόνον ὁ ὑπολιπὴς ἐπιμελαίνεται ὥσπερ μυζώδει ὑγρασία, καὶ πάλιν ὑποφύεται τῷ δευτέρῳ ἔτει χιτῶν ἄλλος ἀντ' ἐκείνου πλὴν λεπτότερος. πέφυκε καὶ τὸ ξύλον ὅμοιον ταῖς ἰσὶ τῷ φλοιῷ στρεπτῶς ἐλιπτόμενον· καὶ οἱ ῥάβδοι φύονται τὸν αὐτὸν τρόπον εὐθύς· τοὺς ὄζους δ' αὐξανομένου συμβαίνει τοὺς μὲν [3] κάτω αἰεὶ ἀπόλλυσθαι τοὺς δ' ἄνω αὖξιν. τὸ δ' ὅλον οὐ πολύοζον τὸ δένδρον ἀλλ' ἀνοζότερον πολὺ τῆς αἰγίρου. πολύρριζον δὲ καὶ ἐπιτολαιόρριζον οὐκ ἄγαν δὲ παχύρριζον· ἢ δ' ἐπιστροφή καὶ τῆς ρίζης καὶ τοῦ φλοιοῦ τοῦ περὶ αὐτὴν ἢ αὐτή. ἄνθος δὲ λευκὸν ἀπὶ καὶ μεσπίλη ὅμοιον, ἐκ μικρῶν ἀνθῶν συγκείμενον κηριῶδες. ὁ δὲ καρπὸς ἐρυθρὸς ὅμοιος διοσπύρῳ τὸ σχῆμα, τὸ δὲ μέγεθος ἡλίκον κύαμος, πλὴν τοῦ διοσπύρου μὲν ὁ πυρὴν σκληρὸς τοῦ δὲ κεράσου μαλακός. φύεται δ' ὅπου καὶ ἡ φίλυρα, τὸ δὲ ὅλον ὅπου ποταμοὶ καὶ ἔφυδρα.

[4] Φύεται δὲ καὶ ἡ ἀκτὴ μάλιστα παρ' ὕδαρ καὶ ἐν τοῖς σκιεροῖς, οὐ μὴν ἀλλὰ καὶ ἐν τοῖς μὴ τοιούτοις· θαμνώδες δὲ ῥάβδοις ἐπετείοις αὐξανομέναις μέχρι τῆς φυλλορροίας εἰς μῆκος, εἴτα μετὰ ταῦτα εἰς πάχος· τὸ δὲ ὕψος τῶν ῥάβδων οὐ μέγα λίαν ἀλλὰ καὶ μάλιστα ὡς ἐξάπηχυν· τῶν δὲ στελεχῶν πάχος

τῶν γερανδρῶν ὅσον περικεφαλαίας, φλοιὸς δὲ λεῖος λεπτὸς καπυρός· τὸ δὲ ξύλον χαῦνον καὶ κοῦφον ξηρανθέν, ἐντεριώνην δὲ ἔχον μαλακὴν, ὥστε δι' ὅλου καὶ κοιλαίνεσθαι τὰς ῥάβδους, ἐξ ὧν καὶ τὰς βακτηρίας ποιοῦσι τὰς κούφας. ξηρανθέν δὲ ἰσχυρὸν καὶ ἀγήρων ἐὰν βρέχεται, κἂν ἥ λελοπισμένον· λοπίζεται δὲ αὐτόματον ξηραίνόμενον. ῥίζας δὲ ἔχει μετεώρους οὐ πολλὰς δὲ οὐδὲ μεγάλας.

[5] φύλλον δὲ τὸ μὲν καθ' ἕκαστον μαλακόν, πρόμηκες ὡς τὸ τῆς πλατυφύλλου δάφνης, μεῖζον δὲ καὶ πλατύτερον καὶ περιφερέστερον ἐκ μέσου καὶ κάτωθεν, τὸ δ' ἄκρον εἰς ὃς μᾶλλον συνήκον κύκλῳ δ' ἔχον χαραγμόν· τὸ δὲ ὅλον, περὶ ἓνα μίσχον παχὺν καὶ ἰνώδη ὡσὰν κλωνίον τὰ μὲν ἔνθεν τὰ δὲ ἔνθεν κατὰ γόνυ καὶ συζυγίαν πεφύκασι τῶν φύλλων διέχοντα ἅπ' ἀλλήλων, ἐν δὲ ἐξ ἄκρου τοῦ μίσχου. ὑπέρυθρα δὲ τὰ φύλλα ἐπιεικῶς καὶ χαῦνα καὶ σαρκώδη· φυλλορροεῖ δὲ τοῦτο ὅλον, διόπερ φύλλον ἂν τις εἴποι τὸ ὅλον. ἔχουσι δὲ καὶ οἱ κλώνες οἱ νέοι γωνοειδῆ τινα.

[6] τὸ δ' ἄνθος λευκὸν ἐκ μικρῶν λευκῶν πολλῶν ἐπὶ τῇ τοῦ μίσχου σχίσει κηριῶδες· εὐωδίαν δὲ ἔχει λειριώδη ἐπιβαρεῖαν. ἔχει δὲ καὶ τὸν καρπὸν ὁμοίως πρὸς ἐνὶ μίσχῳ παχεῖ βοτρυνώδη δέ· γίνεται δὲ καταπεπαινόμενος μέλας, ὠμὸς δὲ ὦν ὁμφακώδης· μεγέθει δὲ μικρῷ μεῖζον ὁρόβου· τὴν ὑγρασίαν δὲ οἰνώδη τῇ ὄψει· καὶ τὰς χεῖρας τελειούμενοι βάπτονται καὶ τὰς κεφαλὰς· ἔχει δὲ καὶ τὰ ἐντὸς σησαμοειδῆ τὴν ὄσιν.

[7] Πάρυδρον δὲ καὶ ἡ ἰτέα καὶ πολυειδές· ἡ μὲν μέλαινα καλουμένη τῷ τὸν φλοιὸν ἔχειν μέλανα καὶ φοινικοῦν, ἡ δὲ λευκὴ τῷ λευκόν. καλλίους δὲ ἔχει τὰς ῥάβδους καὶ χρησιμωτέρας εἰς τὸ πλέκειν ἢ μέλαινα, ἡ δὲ λευκὴ καπυρωτέρας. ἔστι δὲ καὶ τῆς μελαίνης καὶ τῆς λευκῆς ἕνιον γένος μικρὸν καὶ οὐκ ἔχον αὐξήσιν εἰς ὕψος, ὥσπερ καὶ ἐπ' ἄλλων τοῦτο δένδρων, οἷον κέδρου φοίνικος. καλοῦσι δ' οἱ περὶ Ἀρκαδίαν οὐκ ἰτέαν ἀλλὰ ἐλίκην τὸ δένδρον· οἶονται δέ, ὥσπερ ἐλέχθη, καὶ καρπὸν ἔχειν αὐτὴν γόνιμον.

[14.1] Ἔστι δὲ τῆς πετέας δύο γένη, καὶ τὸ μὲν ὀρειπτελέα καλεῖται τὸ δὲ πετέα· διαφέρει δὲ τῷ θαμνωδέστερον εἶναι τὴν πετέαν εὐανξέστερον δὲ τὴν ὀρειπτελέαν. φύλλον δὲ ἀσχιδές περικεχαραγμένον ἡσυχῇ, προμηκέστερον δὲ τοῦ τῆς ἀπίου, τραχὺ δὲ καὶ οὐ λεῖον. μέγα δὲ τὸ δένδρον καὶ τῷ ὕψει καὶ τῷ μεγέθει. πολὺ δ' οὐκ ἔστι περὶ τὴν Ἰδὴν ἀλλὰ σπάνιον· τόπον δὲ ἔφυδρον φιλεῖ. τὸ δὲ ξύλον ξανθὸν καὶ ἰσχυρὸν καὶ εὖνιον καὶ γλίσχρον· ἅπαν γὰρ καρδία· χρῶνται δ' αὐτῷ καὶ πρὸς θυρώματα πολυτελεῖ, καὶ χλωρὸν μὲν εὐτομον ξηρὸν δὲ δύστομον. ἄκαρπον δὲ νομίζουσιν, ἀλλ' ἐν

ταῖς κωρυκίσιν τὸ κόμμι καὶ θηρί' ἅττα κωνωποειδῆ φέρει. τὰς δὲ κάχυς ἰδίᾳς ἴσχει τοῦ μετοπώρου πολλὰς καὶ μικρὰς καὶ μελαίνας, ἐν δὲ ταῖς ἄλλαις ὥραις οὐκ ἐπέσκεπται.

[2] Ἡ δὲ λεύκη καὶ ἡ αἰγειρος μονοειδής, ὀρθοφυῆ δὲ ἄμφω, πλὴν μακρότερον πολὺ καὶ μανότερον καὶ λειότερον ἡ αἰγειρος, τὸ δὲ σχῆμα τῶν φύλλων παρόμοιον. ὅμοιον δὲ καὶ τὸ ξύλον τεμνόμενον τῇ λευκότητι. καρπὸν δ' οὐδέτερον τούτων οὐδὲ ἄνθος ἔχειν δοκεῖ.

Ἡ κερκὶς δὲ παρόμοιον τῇ λεύκῃ καὶ τῷ μεγέθει καὶ τῷ τοὺς κλάδους ἐπιλεύκους ἔχειν· τὸ δὲ φύλλον κιττῶδες μὲν ἀγώνιον δὲ ἐκ τοῦ ἄλλου, τὴν δὲ μίαν προμήκη καὶ εἰς ὀξὺ συνήκουσαν· τῷ δὲ χρώματι σχεδὸν ὅμοιον τὸ ὑπτιον καὶ τὸ πρανές· μίσχῳ δὲ προσηρτημένον μακρῷ καὶ λεπτῷ, δι' ὃ καὶ οὐκ ὀρθὸν ἀλλ' ἐγκεκλιμένον. φλοιὸν δὲ τραχύτερον τῆς λεύκης καὶ μᾶλλον ὑπόλεπρον, ὥσπερ ὁ τῆς ἀχράδος. ἄκαρπον δέ.

[3] Μονογενὲς δὲ καὶ ἡ κλήθρα· φύσει δὲ καὶ ὀρθοφυές, ξύλον δ' ἔχον μαλακὸν καὶ ἐντεριώνην μαλακὴν, ὥστε δι' ὅλου κοιλαίνεσθαι τὰς λεπτάς ῥάβδους. φύλλον δ' ὅμοιον ἀπίῳ. πλὴν μεῖζον καὶ ἰνωδέστερον. τραχύφλοιον δὲ καὶ ὁ φλοιὸς ἔσθθεν ἐρυθρός, δι' ὃ καὶ βάπτει τὰ δέρματα. ῥίζας δὲ ἐπιπολαίους... ἡλικὸν δάφνης. φύεται δὲ ἐν τοῖς ἐφύδροις ἀλλόθι δ' οὐδαμοῦ.

[4] [Σημύδα δὲ τὸ μὲν φύλλον ἔχει ὅμοιον τῇ Περσικῇ καλουμένην καρύα πλὴν μικρῷ στενότερον, τὸν φλοιὸν δὲ ποικίλον, ξύλον δὲ ἐλαφρόν· χρήσιμον δὲ εἰς βακτηρίας μόνον εἰς ἄλλο δὲ οὐδέν.

Ἡ δὲ κολυτέα ἔχει τὸ μὲν φύλλον ἐγγὺς τοῦ τῆς ἰτέας, πολυόζον δὲ καὶ πολύφυλλον καὶ τὸ δένδρον ὅλως μέγα· τὸν δὲ καρπὸν ἔλλοβον, καθάπερ τὰ χεδροπά· λοβοῖς γὰρ πλατέσι καὶ οὐ στενοῖς τὸ σπερμάτιον τὸ ἐνὸν μικρὸν καὶ οὐ μέγα· σκληρὸν δὲ μετρίως οὐκ ἄγαν· οὐδὲ πολύκαρπον ὥς κατὰ μέγεθος. σπάνιον δὲ τὸ ἐν λοβοῖς ἔχειν τὸν καρπὸν· ὀλίγα γὰρ τοιαῦτα τῶν δένδρων.]

[15.1] Ἡ δὲ Ἡρακλεωτικὴ καρύα - φύσει γὰρ καὶ τοῦτ' ἄγριον τῷ τε μηδὲν ἢ μὴ πολὺ χεῖρω γίνεσθαι <ἦ> τῶν ἡμέρων τὸν καρπὸν, καὶ τῷ δύνασθαι χειμῶνας ὑποφέρειν καὶ τῷ πολὺ φύεσθαι κατὰ τὰ ὄρη καὶ πολύκαρπον ἐν τοῖς ὀρείοις· ἔτι δὲ τῷ μηδὲ στελεχῶδες ἀλλὰ θαμνῶδες εἶναι ῥάβδοις ἄνευ μασχαλῶν καὶ ἀνόζοις μακραῖς δὲ καὶ παχεῖαις ἐνίαις· - οὐ μὴν ἀλλὰ καὶ ἐξημεροῦται. διαφορὰν δὲ ἔχει τῷ τὸν καρπὸν ἀποδιδόναι βελτίῳ καὶ μεῖζον τὸ φύλλον· κεχαραγμένον δ' ἀμφοῖν· ὁμοιότατον τὸ τῆς κλήθρας, πλὴν πλατύτερον καὶ αὐτὸ τὸ δένδρον μεῖζον. καρπιμώτερον δ' αἰεὶ γίνεται

κατακοπόμενον [2] τὰς ῥάβδους· γένῃ δὲ δύο ἀμφοῖν· αἱ μὲν γὰρ στρογγύλον αἱ δὲ πρόμακρον φέρουσι τὸ κάρυον· ἐκλευκότερον δὲ τὸ τῶν ἡμέρων· καὶ καλλικαρπεῖ μάλιστα γ' ἐν τοῖς ἐφύδροις· ἐξημεροῦται δὲ τὰ ἄγρια μεταφυτευόμενα· φλοιὸν δ' ἔχει λεῖον ἐπιπόλαιον λεπτὸν λιπαρὸν ἰδίως στιγμὰς λευκὰς ἔχοντα ἐν αὐτῷ· τὸ δὲ ξύλον σφόδρα γλίσχρον, ὥστε καὶ τὰ λεπτὰ πάνυ ῥαβδία περιλοπίσαντες κανέα ποιοῦσι, καὶ τὰ παχέα δὲ καταξύσαντες· ἔχει δὲ καὶ ἐντεριώνην λεπτὴν ξανθὴν, ἣ κοιλαίνεται· ἴδιον δ' αὐτῶν τὸ περὶ τὸν ἴουλον, ὥσπερ εἵπομεν.

[3] Τῆς δὲ τερμίνθου τὸ μὲν ἄρρεν τὸ δὲ θῆλυ· τὸ μὲν οὖν ἄρρεν ἄκαρπον, δι' ὃ καὶ καλοῦσιν ἄρρεν· τῶν δὲ θηλειῶν ἡ μὲν ἐρυθρὸν εὐθύς φέρει τὸν καρπὸν ἡλίκον φακὸν ἄπεπτον, ἡ δὲ χλοερὸν ἐνέγκασα μετὰ ταῦτα ἐρυθραίνει, καὶ ἅμα τῇ ἀμπέλῳ πεπαίνουσα τὸ ἔσχατον ποιεῖ μέλανα, μέγεθος ἡλίκον κύαμον, ῥητινώδη δὲ καὶ θυωδέστερον· ἔστι δὲ τὸ δένδρον περὶ μὲν τὴν Ἰδὴν καὶ Μακεδονίαν βραχὺ θαμνῶδες ἐστραμμένον, περὶ δὲ Δαμασκὸν τῆς Συρίας μέγα καὶ πολὺ καὶ καλόν· ὅρος γάρ τί φασιν εἶναι ἀάμμεστον [4] τερμίνθων, ἄλλο δ' οὐδὲν πεφυκέναι· ξύλον δὲ ἔχει γλίσχρον καὶ ρίζας ἰσχυράς κατὰ βάθους, καὶ τὸ ὅλον ἀνώλεθρον· ἄνθος δὲ ὅμοιον τῷ τῆς ἐλάας, τῷ χρώματι δὲ ἐρυθρόν· φύλλον, περὶ ἓνα μίσχον πλείω δαφνοειδῇ κατὰ συζυγίαν, ὥσπερ καὶ τὸ τῆς οἴης· καὶ τὸ ἐξ ἄκρου περιττόν· πλὴν ἐγγωνιώτερον τῆς οἴης καὶ δαφνοειδέστερον δὲ κύκλῳ καὶ λιπαρὸν ἅπαν ἅμα τῷ καρπῷ· φέρει δὲ καὶ κωρυκώδη τινὰ κοῖλα, καθάπερ ἡ πτελέα, ἐν οἷς θηρίδια ἐγγίγνεται κωνωποειδῇ· ἐγγίγνεται δέ τι καὶ ῥητινῶδες ἐν τούτοις καὶ γλίσχρον· οὐ μὴν ἐνθευτέν γε ἡ ῥητίνη συλλέγεται ἀλλ' ἀπὸ τοῦ ξύλου· ὁ δὲ καρπὸς οὐκ ἀφίησι ῥητίνης πλῆθος, ἀλλὰ προσέχεται μὲν ταῖς χερσί, κἂν μὴ πλυθῇ μετὰ τὴν συλλογὴν συνέχεται· πλυνόμενος δὲ ὁ μὲν λευκὸς καὶ ἄπεπτος ἐπιπλεῖ, ὁ δὲ μέλας ὑφίσταται.

[5] Ἡ δὲ πύξος μεγέθει μὲν οὐ μεγάλη, τὸ δὲ φύλλον ὅμοιον ἔχει μυρρίνω· φύεται δ' ἐν τοῖς ψυχροῖς τόποις καὶ τραχέσι· καὶ γὰρ τὰ Κύτωρα τοιοῦτον, οὗ ἡ πλείστη γίνεται· ψυχρὸς δὲ καὶ ὁ Ὀλυμπος ὁ Μακεδονικός· καὶ γὰρ ἐνταῦθα γίνεται πλὴν οὐ μεγάλη· μεγίστη δὲ καὶ καλλίστη ἐν Κύρνω· καὶ γὰρ εὐμήκεις καὶ πάχος ἔχουσαι πολὺ παρὰ τὰς ἄλλας· δι' ὃ καὶ τὸ μέλι οὐχ ἡδὺ ὅζον τῆς πύξου.

[6] Πλήθει δὲ πολὺ κράταιγός ἐστιν, οἱ δὲ κραταιγὸνα καλοῦσιν· ἔχει δὲ τὸ μὲν φύλλον ὅμοιον μεσπίλῃ τετανόν, πλὴν μείζον ἐκείνου καὶ πλατύτερον ἢ προμηκέστερον, τὸν δὲ χαραγμὸν οὐκ ἔχον ὥσπερ ἐκεῖνο· γίνεται δὲ τὸ

δένδρον οὔτε μέγα λίαν οὔτε παχύ· τὸ δὲ ξύλον ποικίλον ἰσχυρὸν ξανθόν· ἔχει δὲ φλοιὸν λεῖον ὅμοιον μεσπίλῃ· μονόρριζον δ' εἰς βάθος ὡς ἐπὶ τὸ πολὺ· καρπὸν δ' ἔχει στρογγύλον ἡλίκον ὁ κότινος· πεπαινόμενος δὲ ξανθύνεται καὶ ἐπιμελαίνεται· κατὰ δὲ τὴν γεῦσιν καὶ τὸν χυλὸν μεσπιλῶδες· διόπερ οἶον ἀγρία μεσπίλη δόξειεν ἂν εἶναι· μονοειδὲς δὲ καὶ οὐκ ἔχον διαφοράς.

[16.1] Ὁ δὲ πρῖνος φύλλον μὲν ἔχει δρυῶδες, ἔλαττον δὲ καὶ ἐπακανθίζον, τὸν δὲ φλοιὸν λειότερον δρυός. αὐτὸ δὲ τὸ δένδρον μέγα, καθάπερ ἡ δρυς, ἐὰν ἔχη τόπον καὶ ἔδαφος· ξύλον δὲ πυκνὸν καὶ ἰσχυρόν· βαθύρριζον δὲ ἐπιεικῶς καὶ πολύρριζον· καρπὸν δὲ ἔχει βαλανώδη· μικρὰ δὲ ἡ βάλανος· περικαταλαμβάνει δὲ ὁ νέος τὸν ἔνον· ὥπερ γὰρ πεπαίνει, δι' ὃ καὶ διαφορεῖν τινές φασι· φέρει δὲ παρὰ τὴν βάλανον καὶ κόκκον τινὰ φοινικοῦν· ἴσχει δὲ καὶ ἰξίαν καὶ ὑφέαρ· ὥστε ἐνίστε συμβαίνει τέτταρας ἅμα καρποὺς ἔχειν αὐτόν, δύο μὲν τοὺς ἑαυτοῦ δύο δ' ἄλλους τὸν τε τῆς ἰξίας καὶ τὸν τοῦ ὑφέαρος· καὶ τὴν μὲν ἰξίαν φέρει ἐκ τῶν πρὸς βορρᾶν, τὸ δὲ ὑφέαρ ἐκ τῶν πρὸς μεσημβρίαν.

[2] Οἱ δὲ περὶ Ἀρκαδίαν δένδρον τι σμίλακα καλοῦσιν, ὃ ἐστὶν ὅμοιον τῷ πρίνῳ, τὰ δὲ φύλλα οὐκ ἀκανθώδη ἔχει ἀλλ' ἀπαλώτερα καὶ βαθύτερα καὶ διαφοράς ἔχοντα πλείους· οὐδὲ τὸ ξύλον ὥσπερ ἐκεῖνο στερεὸν καὶ πυκνόν, ἀλλὰ καὶ μαλακὸν ἐν ταῖς ἐργασίαις.

[3] Ὁ δὲ καλοῦσιν οἱ Ἀρκαῖδες φελλόδρυν τοιάνδε ἔχει τὴν φύσιν· ὡς μὲν ἀπλῶς εἰπεῖν ἀνὰ μέσον πρίνου καὶ δρυός ἐστίν· καὶ ἐνιοί γε ὑπολαμβάνουσιν εἶναι θήλυν πρίνον· δι' ὃ καὶ ὅπου μὴ φύεται πρῖνος τούτῳ χρῶνται πρὸς τὰς ἀμάξας καὶ τὰ τοιαῦτα, καθάπερ οἱ περὶ Λακεδαίμονα καὶ Ἡλείαν· καλοῦσι δὲ οἱ γε Δωριεῖς καὶ Ἀρίαν τὸ δένδρον· ἔστι δὲ μαλακώτερον μὲν καὶ μανότερον τοῦ πρίνου, σκληρότερον δὲ καὶ πυκνότερον τῆς δρυός· καὶ τὸ χρῶμα φλοισθέντος τοῦ ξύλου λευκότερον μὲν τοῦ πρίνου, οἰνωπότερον δὲ τῆς δρυός· τὰ δὲ φύλλα προσέοικε μὲν ἀμφοῖν, ἔχει δὲ μείζω μὲν ἢ ὡς πρῖνος ἐλάττω δὲ ἢ ὡς δρυς· καὶ τὸν καρπὸν τοῦ μὲν πρίνου κατὰ μέγεθος ἐλάττω ταῖς ἐλαχίσταις δὲ βαλάνοις ἴσον, καὶ γλυκύτερον μὲν τοῦ πρίνου πικρότερον δὲ τῆς δρυός· καλοῦσι δὲ τινες τὸν μὲν τοῦ πρίνου καὶ τὸν ταύτης καρπὸν ἄκυλον, τὸν δὲ τῆς δρυός βάλανον· μήτραν δὲ ἔχει φανερωτέραν ἢ ὁ πρῖνος· καὶ ἡ μὲν φελλόδρυς τοιαύτην τινὰ ἔχει φύσιν.

[4] Ἡ δὲ κόμαρος, ἡ τὸ μεμαίκυλον φέρουσα τὸ ἐδώδιμον, ἐστὶ μὲν οὐκ ἄγαν μέγα, τὸν δὲ φλοιὸν ἔχει λεπτὸν μὲν παρόμοιον μυρίκη, τὸ δὲ φύλλον μεταξὺ πρίνου καὶ δάφνης· ἀνθεῖ δὲ τοῦ Πυανεψιδῶνος· τὰ δὲ ἄνθη πέφυκεν

ἀπὸ μιᾶς κρεμάστρας ἐπ' ἄκρων βοτρυνδόν· τὴν δὲ μορφήν ἕκαστόν ἐστιν ὅμοιον μύρτῳ προμήκει καὶ τῷ μεγέθει δὲ σχεδὸν τηλικούτον· ἄφυλλον δὲ καὶ κοῖλον ὥσπερ ὠὸν ἐκκεκολαμμένον τὸ στόμα δὲ ἀνεωγμένον· ὅταν δ' ἀπανθήσῃ, καὶ ἡ πρόσφυσις τετρύπηται, τὸ δ' ἀπανθήσαν λεπτὸν καὶ ὥσπερ σφόνδυλος περὶ ἄτρακτον ἢ κάρνειος Δωρικός· ὁ δὲ καρπὸς ἐνιαυτῷ πεπαίνεται, ὥσθ' ἅμα συμβαίνει τοῦτόν τ' ἔχειν καὶ τὸν ἕτερον ἀνθεῖν.

[5] Παρόμοιον δὲ τὸ φύλλον καὶ ἡ ἀνδράχλη ἔχει τῷ κομάρῳ, μέγεθος οὐκ ἄγαν μέγα· τὸν δὲ φλοιὸν λεῖον ἔχει καὶ περιρρηγνύμενον· καρπὸν δ' ἔχει ὅμοιον τῇ κομάρῳ.

[6] Ὅμοιον δ' ἐστὶ τοῦτοισι τὸ φύλλον καὶ τὸ τῆς κοκκυγέας· τὸ δὲ δένδρον μικρόν. ἴδιον δὲ ἔχει τὸ ἐκπαπποῦσθαι τὸν καρπὸν· τοῦτο γὰρ οὐδ' ἐφ' ἐνὸς ἀκηκόαμεν ἄλλου δένδρου. ταῦτα μὲν οὖν κοινότερα πλείοσι χώραις καὶ τόποις.

[17.1] Ἔνια δὲ ιδιώτερα, καθάπερ καὶ ὁ φελλός· γίνεται μὲν ἐν Τυρρηνίᾳ, τὸ δὲ δένδρον ἐστὶ στελεχῶδες μὲν καὶ ὀλιγόκλαδον, εὐμηκες δ' ἐπιεικῶς καὶ εὐαυξές· ξύλον ἰσχυρόν· τὸν δὲ φλοιὸν παχὺν σφόδρα καὶ καταρρηγνύμενον, ὥσπερ ὁ τῆς πίτυος, πλὴν κατὰ μείζω. τὸ δὲ φύλλον ὅμοιον ταῖς μελίαις παχὺ προμηκέστερον· οὐκ ἀείφυλλον ἀλλὰ φυλλοβολοῦν. καρπὸν δὲ [αἰεὶ] φέρει βαλανηρὸν ὅμοιον τῇ ἀρίᾳ. περιαιροῦσι δὲ τὸν φλοιὸν καὶ φασὶ δεῖν πάντα ἀφαιρεῖν, εἰ δὲ μὴ χεῖρον γίνεται τὸ δένδρον· ἐξαναπληροῦται δὲ πάλιν σχεδὸν ἐν τρισὶν ἔτεσιν.

[2] Ἰδιον δὲ καὶ ἡ κολουτέα περὶ Λιπάραν· δένδρον μὲν εὐμέγεθες, τὸν δὲ καρπὸν φέρει ἐν λοβοῖς ἡλίκον φακόν, ὃς παιίνει τὰ πρόβατα θαυμαστώς. φύεται δὲ ἀπὸ σπέρματος καὶ ἐκ τῆς τῶν προβάτων κόπρου κάλλιστα. ὥρα δὲ τῆς φυτείας ἅμα Ἀρκτούρῳ δυομένῳ· δεῖ δὲ φυτεύειν προβρέχοντας ὅταν ἡδὴ διαφύηται ἐν τῷ ὕδατι. φύλλον δ' ἔχει παρόμοιον τήλει. βλαστάνει δὲ τὸ πρῶτον μονοφυῆς ἐπὶ ἔτη μάλιστα τρία ἐν οἷς καὶ τὰς βακτηρίας τέμνουσι· δοκοῦσι γὰρ εἶναι καλαί· καὶ ἐάν τις κολούσῃ ἀποθνήσκει· καὶ γὰρ ἀπαράβλαστόν ἐστιν· εἴτα σχίζεται καὶ ἀποδενδροῦται τῷ τετάρτῳ ἔτει.

[3] Ἡ δὲ περὶ τὴν Ἰδην, ἣν καλοῦσι κολοιτίαν, ἕτερον εἰδὸς ἐστίν, θαμνοειδὲς δὲ καὶ ὀζῶδες καὶ πολυμάσχαλον, σπάνιον δέ, οὐ πολὺ· ἔχει δὲ φύλλον δαφνοειδὲς πλατυφύλλου δάφνης, πλὴν στρογγυλώτερον καὶ μεῖζον ὥσθ' ὅμοιον φαίνεσθαι τῷ τῆς πετελέας, προμηκέστερον δέ, τὴν χροάν ἐπὶ θάτερα χλοερὸν ὀπισθεν δὲ ἐπιλευκαῖνον, καὶ πολὺν ἐκ τῶν ὀπισθεν ταῖς λεπταῖς ἰσὶ ἐκ τε τῆς ῥάχεως καὶ μεταξὺ τῶν πλευροειδῶν ἀπὸ τῆς μέσης

κατατεινουσῶν· φλοιὸν δ' οὐ λείον ἀλλ' οἶον τὸν τῆς ἀμπέλου· τὸ δὲ ξύλον σκληρὸν καὶ πυκνόν· ῥίζας δὲ ἐπιτολαίους καὶ λεπτὰς καὶ μακρὰς οὐλὰς δ' ἐνίοτε, καὶ ξανθὰς σφόδρα. καρπὸν δὲ οὐκ ἔχειν φασὶν οὐδὲ ἄνθος· τὴν δὲ κορυνώδη κάχρυν καὶ τοὺς ὀφθαλμοὺς τοὺς παρὰ τὰ φύλλα λείους σφόδρα καὶ λιπαροὺς καὶ λευκοὺς τῷ σχήματι δὲ καχυρώδεις· ἀποκοπὴν δὲ καὶ ἐπικαυθὲν παραφύεται καὶ ἀναβλαστάνει.

[4] Ἰδία δὲ καὶ τάδε τὰ περὶ τὴν Ἰδην ἐστίν, οἶον ἢ τε Ἀλεξάνδρεια καλουμένη δάφνη καὶ συκὴ τις καὶ ἄμπελος. τῆς μὲν οὖν δάφνης ἐν τούτῳ τὸ ἴδιον, ὅτι ἐπιφυλλόκαρπὸν ἐστίν, ὥσπερ καὶ ἡ κεντρομυρρίνη· ἀμφοτέραι γὰρ τὸν καρπὸν ἔχουσιν ἐκ τῆς ῥάχεως τοῦ φύλλου.

[5] Ἡ δὲ συκὴ θαμνῶδες μὲν καὶ οὐχ ὑψηλόν, πάχος δ' ἔχον ὥστε καὶ πηχυαῖον εἶναι τὴν περίμετρον· τὸ δὲ ξύλον ἐπεστραμμένον γλίσχρον· κάτωθεν μὲν λείον καὶ ἄνοζον ἄνωθεν δὲ περίκομον· χρῶμα δὲ καὶ φύλλον καὶ φλοιοῦ πελιόν, τὸ δὲ σχῆμα τῶν φύλλων ὅμοιον τῷ τῆς φυλῦρας καὶ μαλακὸν καὶ πλατὺ καὶ τὸ μέγεθος παραπλήσιον· ἄνθος μεσπιλῶδες καὶ ἀνθεῖ ἅμα τῇ μεσπίλῃ. ὁ δὲ καρπός, ὃν καλοῦσι σῦκον, ἐρυθρὸς ἡλικὸς ἐλάας πλὴν στρογγυλότερος, ἐσθιόμενος δὲ μεσπιλώδης· ῥίζας δὲ ἔχει παχείας ὡσὰν συκῆς ἡμέρου καὶ γλίσχρας. ἀσαπὲς δὲ ἐστὶ τὸ δένδρον καὶ καρδίαν ἔχει στερεὰν οὐκ ἐντεριώνην.

[6] Ἡ δὲ ἄμπελος φύεται μὲν τῆς Ἰδης περὶ τὰς Φαλάκρας καλουμένας· ἐστὶ δὲ θαμνῶδες ῥαβδίους μικροῖς· τείνονται δὲ οἱ κλῶνες ὡς πυγωνιαῖοι, πρὸς οἷς ῥᾶγές εἰσιν ἐκ πλαγίου μέλαιναι τὸ μέγεθος ἡλικὸς κύαμος γλυκεῖται· ἔχουσι δὲ ἐντὸς γιγαρτῶδές τι μαλακόν· φύλλον στρογγύλον ἀσχιδὲς μικρόν.

[18.1] Ἐχει δὲ καὶ ἄλλα σχεδὸν ὅρη φύσεις τινὰς ἰδίας τὰ μὲν δένδρων τὰ δὲ θάμνων τὰ δ' ἄλλων ὑλημάτων. ἀλλὰ γὰρ περὶ μὲν τῆς ιδιότητος εἴρηται πλεονάκις ὅτι γίνεται καθ' ἐκάστους τόπους. ἡ δὲ ἐν αὐτοῖς τοῖς ὁμογενέσιν διαφορά, καθάπερ ἡ τῶν δένδρων καὶ τῶν θάμνων, ὁμοίως ἐστὶ καὶ τῶν ἄλλων, ὥσπερ εἴρηται, τῶν πλείστων, ὥσπερ καὶ ῥάμνου καὶ παλιούρου καὶ οἴσου [καὶ οἴτου] καὶ ῥοῦ καὶ κιττοῦ καὶ βάτου καὶ ἐτέρων πολλῶν.

[2] Ῥάμνος τε γὰρ ἐστὶν ἡ μὲν μέλαινα ἡ δὲ λευκὴ, καὶ ὁ καρπὸς διάφορος, ἀκανθοφόροι δὲ ἄμφω.

Τοῦ τε οἴσου τὸ μὲν λευκὸν τὸ δὲ μέλαν· καὶ τὸ ἄνθος ἐκατέρου καὶ ὁ καρπὸς κατὰ λόγον ὁ μὲν λευκὸς ὁ δὲ μέλας· ἐνιοὶ δὲ καὶ ὥσπερ ἀνὰ μέσον, ὧν καὶ τὸ ἄνθος ἐπιπορφυρίζει καὶ οὔτε οἰνωπὸν οὔτε ἔκλευκόν ἐστίν ὥσπερ τῶν ἐτέρων. ἔχει δὲ καὶ τὰ φύλλα λεπτότερα καὶ λειότερα καὶ τὰς ῥάβδους τὸ

λευκόν.

[3] Ὁ τε παλίουρος ἔχει διαφορὰς ... ἅπαντα δὲ ταῦτα καρποφόρα. καὶ ὁ γε παλίουρος ἐν λοβῷ τινι τὸν καρπὸν ἔχει καθαπερεὶ φύλλῳ, ἐν ᾧ τρία ἢ τέτταρα γίνεται. χρῶνται δ' αὐτῷ πρὸς τὰς βῆχας οἱ ἱατροὶ κόπτοντες· ἔχει γάρ τινα γλισχρότητα καὶ λίπος, ὥσπερ τὸ τοῦ λίνου σπέρμα. φύεται δὲ καὶ ἐπὶ τοῖς ἐφύδροις καὶ ἐν τοῖς ξηροῖς, ὥσπερ ὁ βάτος. [οὐχ ἦττον δέ ἐστι τὸ δένδρον ἀρύδρον.] φυλλοβόλον δὲ καὶ οὐχ ὥσπερ ἡ ῥάμνος ἀείφυλλον.

[4] Ἔτι δὲ καὶ τοῦ βάτου πλείω γένη, μεγίστην δὲ ἔχοντες διαφορὰν ὅτι ὁ μὲν ὀρθοφυῆς καὶ ὕψος ἔχων, ὁ δ' ἐπὶ τῆς γῆς καὶ εὐθύς κάτω νεύων καὶ ὅταν συνάπτη τῇ γῇ ριζούμενος πάλιν, ὃν δὴ καλοῦσι τινες χαμαίβατον. τὸ δὲ κυνόςβατον τὸν καρπὸν ὑπέρυθρον ἔχει καὶ παραπλήσιον τῷ τῆς ρόας· ἐστι δὲ θάμνου καὶ δένδρου μεταξὺ καὶ παρόμοιον ταῖς ρόαις, τὸ δὲ φύλλον ἀκανθῶδες.

[5] Τῆς δὲ ροῦ τὸ μὲν ἄρρεν τὸ δὲ θῆλυ καλοῦσι τῷ τὸ μὲν ἄκαρπον εἶναι τὸ δὲ κάρπιμον. οὐκ ἔχει δὲ οὐδὲ τὰς ῥάβδους ὑψηλὰς οὐδὲ παχείας, φύλλον δ' ὅμοιον πετέα πλην μικρὸν προμηκέστερον καὶ ἐπίδασυ. τῶν δὲ κλωνίων τῶν νέων ἐξ ἴσου τὰ φύλλα εἰς δύο, κατ' ἄλληλα δὲ ἐκ τῶν πλαγίων ὥστε στοιχεῖν. βάπτουσι δὲ τούτῳ καὶ οἱ σκυτοδέσαι τὰ δέρματα τὰ λευκά. ἄνθος λευκὸν βοτρυῶδες, τῷ σχήματι δὲ τὸ ὀλοσχερὲς ὄστλιγγας ἔχον ὥσπερ καὶ ὁ βότρυς· ἀπανθήσαντος δὲ ὁ καρπὸς ἅμα τῇ σταφύλῃ ἐρυθραίνεται, καὶ γίνονται οἶον φακοὶ λεπτοὶ συγκείμενοι· βοτρυῶδες δὲ τὸ σχῆμα καὶ τούτων. ἔχει δὲ τὸ φαρμακῶδες τοῦτο ὃ καλεῖται ροῦς ἐν αὐτῷ ὀστῶδες, ὃ καὶ τῆς ροῦ διητημένης ἔχει πολλάκις· ρίζα δ' ἐπιπόλαιος καὶ μονοφυῆς ὥστε ἀνακάμπτεσθαι ῥαδίως ὀλόρριζα· τὸ δὲ ξύλον ἐντεριώνην ἔχει, εὐφθαρτον δὲ καὶ κοπτόμενον. ἐν πᾶσι δὲ γίγνεται τοῖς τόποις, εὐθενεὶ δὲ μάλιστα ἐν τοῖς ἀργιλώδεσι.

[6] Πολυειδὴς δὲ ὁ κιττός· καὶ γὰρ ἐπίγειος, ὁ δὲ εἰς ὕψος αἰρόμενος· καὶ τῶν ἐν ὕψει πλείω γένη. τρία δ' οὖν φαίνεται τὰ μέγιστα ὃ τε λευκὸς καὶ ὁ μέλας καὶ τρίτον ἢ ἑλιξ. εἶδη δὲ καὶ ἐκάστου τούτων πλείω. λευκὸς γὰρ ὁ μὲν τῷ καρπῷ μόνον, ὁ δὲ καὶ τοῖς φύλλοις ἐστί. πάλιν δὲ τῶν λευκοκάρπων μόνον ὁ μὲν ἄδρὸν καὶ πυκνὸν καὶ συνεστηκότα τὸν καρπὸν ἔχει καθαπερεὶ σφαῖραν, ὃν δὴ καλοῦσι τινες κορυμβίαν, οἱ δ' Ἀθήνησιν Ἀχαρνικόν. ὁ δὲ ἐλάττων διακεχυμένος ὥσπερ καὶ ὁ μέλας· ἔχει δὲ καὶ ὁ μέλας διαφορὰς ἄλλ' οὐχ ὁμοίως φανεράς.

[7] Ἡ δὲ ἑλιξ ἐν μεγίσταις διαφοραῖς· καὶ γὰρ τοῖς φύλλοις πλεῖστον

διαφέρει τῇ τε μικρότητι καὶ τῷ γωνοειδῇ καὶ εὐρυθμότερα εἶναι· τὰ δὲ τοῦ
κιττοῦ περιφερέστερα καὶ ἀπλᾶ· καὶ τῷ μήκει τῶν κλημάτων καὶ ἔτι τῷ
ἄκαρπος εἶναι. διατείνονται γάρ τινες τῷ μὴ ἀποκιττοῦσθαι τῇ φύσει τὴν
ἔλικα ἀλλὰ τὴν ἐκ τοῦ κιττοῦ τελειουμένην. (εἰ δὲ πᾶσα ἀποκιττοῦται,
καθάπερ τινὲς φασιν, ἡλικίας ἂν εἴη καὶ διαθέσεως οὐκ εἰδους διαφορά,
καθάπερ καὶ τῆς ἀπίου πρὸς τὴν ἀχράδα.) πλὴν τό γε φύλλον καὶ ταύτης πολὺ
διαφέρει πρὸς τὸν κιττόν. σπάνιον δὲ τοῦτο καὶ ἐν ὀλίγοις ἐστὶν ὥστε
παλαιούμενον μεταβάλλειν, [8] ὥσπερ ἐπὶ τῆς λεύκης καὶ τοῦ κρότωνος. εἶδη
δ' ἐστὶ πλείω τῆς ἔλικος, ὡς μὲν τὰ προφανέστατα καὶ μέγιστα λαβεῖν τρία, ἣ
τε χλοερὰ καὶ ποιώδης ἥπερ καὶ πλείστη, καὶ ἐτέρα ἡ λευκὴ, καὶ τρίτη ἡ
ποικίλη, ἣν δὴ καλοῦσιν τινες Θρακίαν. ἐκάστη δὲ τούτων δοκεῖ διαφέρειν· καὶ
γὰρ τῆς χλωόδους ἡ μὲν λεπτοτέρα καὶ ταξιφυλλοτέρα καὶ ἔτι
πυκνοφυλλοτέρα, ἡ δ' ἥττον πάντα ταῦτ' ἔχουσα. καὶ τῆς ποικίλης ἡ μὲν
μεῖζον ἡ δ' ἔλαττον τὸ φύλλον, καὶ τὴν ποικίλιαν διαφέρουσα. ὡσαύτως δὲ
καὶ τὰ τῆς λευκῆς τῷ μεγέθει καὶ τῇ χροιᾷ διαφέρουσιν. εὐαυξεστάτη δὲ ἡ
ποιώδης καὶ ἐπὶ πλείστον προϊοῦσα. φανερὰν δ' εἶναί φασιν τὴν
ἀποκιττουμένην οὐ μόνον τοῖς φύλλοις ὅτι μεῖζω καὶ πλατύτερα ἔχει ἀλλὰ καὶ
τοῖς βλαστοῖς· εὐθύς γὰρ ὀρθοὺς ἔχει, καὶ οὐχ ὥσπερ ἡ ἐτέρα κατακεκαμμένη,
καὶ διὰ τὴν λεπτότητα καὶ διὰ τὸ μῆκος· τῆς δὲ κιττώδους καὶ βραχύτεροι καὶ
παχύτεροι. καὶ ὁ κιττὸς ὅταν ἄρχηται σπερμοῦσθαι μετέωρον ἔχει καὶ ὀρθὸν
τὸν βλαστόν.

[9] Πολύρριζος μὲν οὖν ἅπας κιττὸς καὶ πυκνόρριζος συνεστραμμένος ταῖς
ρίζαις καὶ ξυλώδεσι καὶ παχεῖαις καὶ οὐκ ἄγαν βαθύρριζος, μάλιστα δ' ὁ
μέλας, καὶ τοῦ λευκοῦ ὁ τραχύτατος καὶ ἀγριώτατος· δι' ὃ καὶ χαλεπὸς
παραφύεσθαι πᾶσι τοῖς δένδροις· ἀπόλλυσι γὰρ πάντα καὶ ἀφαιεῖναι
παραιρούμενος τὴν τροφήν. λαμβάνει δὲ μάλιστα πάχος οὗτος καὶ
ἀποδενδροῦται καὶ γίνεται αὐτὸ καθ' αὐτὸ κιττοῦ δένδρον. ὡς δ' ἐπὶ τὸ πλεῖον
εἶναι πρὸς ἐτέρῳ φιλεῖ καὶ ζητεῖ καὶ ὥσπερ [10] ἐπαλλόκαυλόν ἐστιν. ἔχει δ'
εὐθύς καὶ τῆς φύσεώς τι τοιοῦτον· ἐκ γὰρ τῶν βλαστῶν ἀφίησιν αἰεὶ ρίζας ἀνά
μέσον τῶν φύλλων, αἵσπερ ἐνδύεται τοῖς δένδροις καὶ τοῖς τειχίοις οἷον
ἐξεπίτηδες πεποιημέναις ὑπὸ τῆς φύσεως· δι' ὃ καὶ ἐξαιρούμενος τὴν
ὕγρότητα καὶ ἔλκων ἀφαιεῖναι, καὶ ἐὰν ἀποκοπῇ κάτωθεν δύναται διαμένειν
καὶ ζῆν. ἔχει δὲ καὶ ἐτέραν διαφορὰν κατὰ τὸν καρπὸν οὐ μικράν· ὁ μὲν γὰρ
ἐπίγλυκός ἐστιν ὁ δὲ σφόδρα πικρὸς καὶ τοῦ λευκοῦ καὶ τοῦ μέλανος· σημειὼν
δ' ὅτι τὸν μὲν ἐσθίουσιν οἱ ὄρνιθες τὸν δ' οὐ. τὰ μὲν οὖν περὶ τὸν κιττόν

οὕτως ἔχει.

[11] Ἡ δὲ συμῖλαξ ἐστὶ μὲν ἐπαλλόκαυλον, ὁ δὲ καυλὸς ἀκανθώδης καὶ ὥσπερ ὀρθάκανθος, τὸ δὲ φύλλον κιττῶδες μικρὸν ἀγώνιον, κατὰ τὴν μίσχου πρόσφυσιν τυληρόν. ἴδιον δ' ὅτι τὴν τε διὰ μέσου ταύτην ὥσπερ ῥάχιν λεπτὴν ἔχει καὶ τὰς στημονίους διαλήψεις οὐκ ἀπὸ ταύτης, ὥσπερ τὰ τῶν ἄλλων, ἀλλὰ περὶ αὐτὴν περιφερεῖς ἡγμένας ἀπὸ τῆς προσφύσεως τοῦ μίσχου τῷ φύλλῳ. παρὰ δὲ τοῦ καυλοῦ τὰ γόνата καὶ παρὰ τὰς διαλείψεις τὰς φυλλικὰς ἐκ τῶν αὐτῶν μίσχων τοῖς φύλλοις παραπέφυκεν ἴουλος λεπτὸς καὶ ἐλικτός· ἄνθος δὲ λευκὸν καὶ εὐῶδες λείρινον· τὸν δὲ καρπὸν ἔχει προσεμφερῆ τῷ στρύχνῳ καὶ τῷ μηλώθρῳ καὶ μάλιστα τῇ καλουμένῃ σταφυλῇ [12] ἀγρία· κατακρέμαστοι δ' οἱ βότρυνες κιττοῦ τρόπον· παρεγγίξει δ' ὁ παραθριγκισμὸς πρὸς τὴν σταφυλὴν· ἀπὸ γὰρ ἐνὸς σημείου οἱ μίσχοι οἱ ῥαγικοί. ὁ δὲ καρπὸς ἐρυθρός, ἔχων πυρῆνας τὸ μὲν ἐπὶ πᾶν δύο, ἐν τοῖς μείζοσι τρεῖς ἐν δὲ τοῖς μικροῖς ἕνα· σκληρὸς δ' ὁ πυρὴν εὖ μάλα καὶ τῷ χρώματι μέλας ἐξωθεν. ἴδιον δὲ τὸ τῶν βοτρυῶν, ὅτι ἐκ πλαγίων τε τὸν καυλὸν παραθριγκίζουσιν, καὶ κατ' ἄκρον ὁ μέγιστος βότρυν τοῦ καυλοῦ, ὥσπερ ἐπὶ τῆς ῥάμνου καὶ τοῦ βάτου. τοῦτο δὲ δῆλον ὡς καὶ ἀκρόκαρπον καὶ πλαγίοκαρπον.

[13] [Τὸ δ' εὐώνυμος καλούμενον δένδρον φύεται μὲν ἄλλοθι τε καὶ τῆς Λέσβου ἐν τῷ ὄρει τῷ Ὀρδύννῳ καλουμένῳ· ἔστι δὲ ἡλικὸν ῥόα καὶ τὸ φύλλον ἔχει ῥοῶδες, μείζον δὲ ἢ χαμαιδάφνης, καὶ μαλακὸν δὲ ὥσπερ ἡ ῥόα. ἡ δὲ βλάστησις ἄρχεται μὲν αὐτῷ περὶ τὸν Ποσειδεῶνα· ἀνθεῖ δὲ τοῦ ἥρος· τὸ δὲ ἄνθος ὅμοιον τὴν χροάν τῷ λευκῷ ἴφ· ὅζει δὲ δεινὸν ὥσπερ φόνου. ὁ δὲ καρπὸς ἐμπερὴς τὴν μορφήν μετὰ τοῦ κελύφους τῷ τοῦ σιγάμου λοβῷ· ἐνδοθεν δὲ στερεὸν πλὴν διηρημένον κατὰ τὴν τετραστοιχίαν. τοῦτο ἐσθιόμενον ὑπὸ τῶν προβάτων ἀποκτιννύει, καὶ τὸ φύλλον καὶ ὁ καρπός, καὶ μάλιστα τὰς αἴγας ἐὰν μὴ καθάρσεως τύχη. καθαίρεται δὲ ἀνόχῳ.] περὶ μὲν οὖν δένδρων καὶ θάμνων εἴρηται· ἐν δὲ τοῖς ἐξῆς περὶ τῶν λειπομένων λεκτέον.

Liber IV

[1] Αἱ μὲν οὖν διαφοραὶ τῶν ὁμογενῶν τεθεώρηται πρότερον. ἅπαντα δ' ἐν τοῖς οἰκείοις τόποις καλλίω γίνεται καὶ μᾶλλον εὐσθενεῖ· καὶ γὰρ τοῖς ἀγρίοις εἰσὶν ἐκάστοις οἰκεῖοι, καθάπερ τοῖς ἡμέροις· τὰ μὲν γὰρ φιλεῖ τοὺς ἐφύδρους καὶ ἐλώδεις, οἷον αἰγίρος λεύκη ἰτέα καὶ ὅλως τὰ παρὰ τοὺς ποταμοὺς φυόμενα, τὰ δὲ τοὺς εὐσκεπεῖς καὶ εὐηλίους, τὰ δὲ μᾶλλον τοὺς παλισκίους. πεύκη μὲν γὰρ ἐν τοῖς προσείλοις καλλίστη καὶ μεγίστη, ἐν δὲ τοῖς παλισκίοις ὅλως οὐ φύεται· ἐλάτη δὲ ἀνάπαλιν ἐν τοῖς παλισκίοις καλλίστη τοῖς δ' εὐείλοις οὐχ ὁμοίως.

[2] Ἐν Ἀρκαδίᾳ γοῦν περὶ τὴν Κράνην καλουμένην τόπος ἐστὶ τις κοῖλος καὶ ἄπνους, εἰς ὃν οὐδέποθ' ὅλως ἥλιον ἐμβάλλειν φασίν· ἐν τούτῳ δὲ πολὺ διαφέρουσιν αἱ ἐλάται καὶ τῷ μήκει καὶ τῷ πάχει, οὐ μὴν ὁμοίως γε πυκναὶ οὐδ' ὠραῖαι ἀλλ' ἥκιστα, καθάπερ καὶ αἱ πεῦκαι αἱ ἐν τοῖς παλισκίοις· δι' ὃ καὶ πρὸς τὰ πολυτελῆ τῶν ἔργων, οἷον θυρώματα καὶ εἰ τι ἄλλο σπουδαῖον, οὐ χρῶνται τούτοις ἀλλὰ πρὸς τὰς ναυπηγίας μᾶλλον καὶ τὰς οἰκοδομάς· καὶ γὰρ δοκοὶ κάλλισται καὶ τανεῖαι καὶ κέραιαι αἱ ἐκ τούτων, ἔτι δ' ἴστοι τῷ μήκει διαφέροντες ἀλλ' οὐχ ὁμοίως ἰσχυροί· καὶ ἐκ τῶν προσείλων ἅμα τῇ βραχύτητι πυκνότεροί τε ἐκείνων καὶ ἰσχυρότεροι γίνονται.

[3] Χαίρει δὲ σφόδρα καὶ ἡ μίλος τοῖς παλισκίοις καὶ ἡ πάδος καὶ ἡ θραύπαλος. περὶ δὲ τὰς κορυφὰς τῶν ὀρέων καὶ τοὺς ψυχροὺς τόπους θυία μὲν φύεται καὶ εἰς ὕψος, ἐλάτη δὲ καὶ ἄρκευθος φύεται μὲν οὐκ εἰς ὕψος δέ, καθάπερ καὶ περὶ τὴν ἄκραν Κυλλήνην· φύεται δὲ καὶ ἡ κήλαστρος ἐπὶ τῶν ἄκρων καὶ χειμεριωτάτων. ταῦτα μὲν οὖν ἂν τις θεῖη φιλόψυχρα· τὰ δ' ἄλλα πάντα ὥς εἰπεῖν [οὐ] μᾶλλον χαίρει τοῖς προσείλοις. οὐ μὴν ἀλλὰ καὶ τοῦτο συμβαίνει κατὰ τὴν χώραν τὴν οἰκείαν ἐκάστῳ τῶν δένδρων. ἐν Κρήτῃ γοῦν φασιν ἐν τοῖς Ἰδαίοις ὄρεσι καὶ ἐν τοῖς Λευκοῖς καλουμένοις ἐπὶ τῶν ἄκρων ὅθεν οὐδέποτ' ἐπιλείπει χιὼν κυπάριττον εἶναι· πλείστη γὰρ αὕτη τῆς ὕλης καὶ ὅλως ἐν τῇ νήσῳ καὶ ἐν τοῖς ὄρεσιν.

[4] Ἔστι δέ, ὥσπερ καὶ πρότερον εἴρηται, καὶ τῶν ἀγρίων καὶ τῶν ἡμέρων τὰ μὲν ὀρεῖνὰ τὰ δὲ πεδεῖνὰ μᾶλλον. ἀναλογία δὲ καὶ ἐν αὐτοῖς τοῖς ὄρεσι τὰ μὲν ἐν τοῖς ὑποκάτω τὰ δὲ περὶ τὰς κορυφὰς, ὥστε καὶ καλλίω γίνεται καὶ εὐσθενῇ πανταχοῦ δὲ καὶ πάσης τῆς ὕλης πρὸς βορρᾶν τὰ ξύλα πυκνότερα καὶ οὐλότερα καὶ ἀπλῶς καλλίω· καὶ ὅλως δὲ πλείω ἐν τοῖς προσβορείοις φύεται. αὐξάνεται δὲ καὶ ἐπιδίδωσι τὰ πυκνὰ μὲν ὄντα μᾶλλον εἰς μῆκος, δι' ὃ καὶ

ἄνοζα καὶ εὐθέα καὶ ὀρθοφυῇ γίνεται, καὶ κωπεῶνες ἐκ τούτων κάλλιστοι· <τὰ δὲ μανὰ> μᾶλλον εἰς βάθος καὶ πάχος, δι' ὃ καὶ σκολιώτερα καὶ ὀζωδέστερα καὶ τὸ ὅλον στερεώτερα καὶ πυκνότερα φύεται.

[5] Σχεδὸν δὲ τὰς αὐτὰς ἔχει διαφορὰς τούτοις καὶ ἐν τοῖς παλισκίοις καὶ ἐν τοῖς εὐείλοις καὶ ἐν τοῖς ἀπνόοις καὶ εὐπνόοις· ὀζωδέστερα γὰρ καὶ βραχύτερα καὶ ἦττον εὐθέα τὰ ἐν τοῖς εὐείλοις ἢ τοῖς προσηγέμοις. ὅτι δὲ ἕκαστον ζητεῖ καὶ χώραν οἰκείαν καὶ κρᾶσιν ἀέρος φανερόν τῷ τὰ μὲν φέρειν ἐνίους τόπους τὰ δὲ μὴ φέρειν μήτε αὐτὰ γιγνόμενα μήτε φυτευόμενα ῥαδίως, εἰδὼς δὲ καὶ ἀντιλάβηται μὴ καρποφορεῖν, ὥσπερ ἐπὶ τοῦ φοίνικος ἐλέχθη καὶ τῆς Αἰγυπτίας συκαμίνου καὶ ἄλλων· εἰσὶ γὰρ πλείω καὶ ἐν πλείοσι χώραις τὰ μὲν ὅλως οὐ φυόμενα τὰ δὲ φυόμενα μὲν ἀναυξῇ δὲ καὶ ἄκαρπα καὶ τὸ ὅλον φαῦλα. περὶ ὧν ἴσως λεκτέον ἐφ' ὅσον ἔχομεν ἱστορίας.

[2.1] Ἐν Αἰγύπτῳ γὰρ ἐστὶν ἴδια δένδρα πλείω, ἢ τε συκάμιнос καὶ ἡ περσέα καλουμένη καὶ ἡ βάλανος καὶ ἡ ἄκανθα καὶ ἕτερ' ἅττα.

Ἔστι δὲ ἡ μὲν συκάμιнос παραπλησία πως τῇ ἐνταῦθα συκαμίνῳ· καὶ γὰρ τὸ φύλλον παρόμοιον ἔχει καὶ τὸ μέγεθος καὶ τὴν ὅλην πρόσοψιν, τὸν δὲ καρπὸν ἰδίως φέρει παρὰ τὰ ἄλλα, καθάπερ ἐλέχθη καὶ ἐν τοῖς ἐξ ἀρχῆς· οὐ γὰρ ἀπὸ τῶν βλαστῶν οὐδ' ἀπὸ τῶν ἀκρεμόνων ἀλλ' ἐκ τοῦ στελέχους, μέγεθος μὲν ἡλίκον σῦκον καὶ τῇ ὄψει δὲ παραπλήσιον, τῷ χυλῷ δὲ καὶ τῇ γλυκύτητι τοῖς ὀλύνθοις, πλὴν γλυκύτερον πολὺ καὶ κεγχραμίδας ὅλως οὐκ ἔχοντα, πλήθει δὲ πολύν. καὶ πέττειν οὐ δύναται μὴ ἐπικνισθέντα· ἀλλ' ἔχοντες ὄνυχας σιδηροῦς ἐπικνίζουσιν· ἃ δ' ἂν ἐπικνισθῇ τεταρταῖα πέττεται· τούτων δ' ἀφαιρεθέντων πάλιν ἄλλα φύεται καὶ ἄλλα καὶ ἐκ τοῦ αὐτοῦ τόπου μηδὲν παραλλάττοντα· καὶ τοῦθ' οἱ μὲν τρις οἱ δὲ πλεονάκις φασὶ γίνεσθαι.

[2] πολύοπον δὲ τὸ δένδρον σφόδρα ἐστὶ καὶ τὸ ξύλον αὐτοῦ εἰς πολλὰ χρήσιμον. ἴδιον δὲ ἔχειν δοκεῖ παρὰ τᾶλλα· τμηθὲν γὰρ εὐθὺς χλωρόν ἐστὶ· αὐαίνεται δὲ ἐμβύθιον· εἰς βόθρον δὲ ἐμβάλλουσι καὶ εἰς τὰς λίμνας εὐθὺς καὶ ταριχεύουσι· βρεχόμενον δ' ἐν τῷ βυθῷ ξηραίνεται· καὶ ὅταν τελέως ξηρόν γένηται, τότε ἀναφέρεται καὶ ἐπινεῖ καὶ δοκεῖ τότε καλῶς τεταριχεῦσθαι· γίνεται γὰρ κοῦφον καὶ μανόν. ἡ μὲν οὖν συκάμιнос ἔχει ταύτας τὰς ιδιότητας.

[3] Ἔοικε δὲ τις παραπλησία ἡ φύσις εἶναι καὶ τῆς ἐν Κρήτῃ καλουμένης Κυπρίας συκῆς· καὶ γὰρ ἐκείνη φέρει τὸν καρπὸν ἐκ τοῦ στελέχους καὶ ἐκ τῶν παχυτάτων ἀκρεμόνων, πλὴν ὅτι βλαστὸν τινα ἀφήσῃ μικρὸν ἄφυλλον ὥσπερ ῥίζιον, πρὸς ᾧ γε ὁ καρπός. τὸ δὲ στέλεχος μέγα καὶ παρόμοιον τῇ λεύκῃ,

φύλλον δὲ τῇ πτελέα. πεπαίνει δὲ τέτταρας καρπούς, ὅσαιπερ αὐτοῦ καὶ αἱ βλαστήσεις· οὐδένα δὲ πεπαίνει μὴ ἐπιτηθέντος τοῦ ἐρινοῦ καὶ ἐκρυνέντος τοῦ ὀποῦ. ἡ δὲ γλυκύτης προσεμφερῆς τῷ σύκῳ καὶ τὰ ἔσωθεν τοῖς ἐρινοῖς· μέγεθος ἡλικὸν κοκκύμηλον.

[4] (Ταύτῃ δὲ παραπλησία καὶ ἦν οἱ Ἴωνες κερωνίαν καλοῦσιν· ἐκ τοῦ στελέχους γὰρ καὶ αὕτῃ φέρει τὸν πλείστον καρπὸν, ἀπὸ δὲ τῶν ἀκρεμόνων, ὥσπερ εἵπομεν, ὀλίγον. ὁ δὲ καρπὸς ἔλλοβος, ὃν καλοῦσιν τινες Αἰγύπτιον σῦκον διημαρτηκότες· οὐ γίνεται γὰρ ὅλως περὶ Αἶγυπτον ἀλλ' ἐν Συρίᾳ καὶ ἐν Ἰωνίᾳ δὲ καὶ περὶ Κνίδον καὶ Ῥόδον. ἀείφυλλον δὲ καὶ ἄνθος ἐκλευκὸν ἔχον καὶ τι βαρύτητος, μὴ μετεωρίζον δὲ σφόδρα καὶ ὅλως ἐκ τῶν κάτω παραβλαστητικὸν ἄνωθεν δὲ ὑποξηραινόμενον. ἔχει δὲ ἅμα καὶ τὸν ἔνον καὶ τὸν νέον καρπὸν· ἀφαιρουμένου γὰρ θατέρου μετὰ Κύνα καὶ ὁ ἕτερος εὐθὺς φανερὸς κυούμενος· κύεται γὰρ ὥσπερ βότρυς ὁμοσχήμων· εἴτ' αὐξηθεὶς ἀνθεῖ περὶ Ἀρκτοῦρον καὶ ἰσημερίαν· ἀπὸ τούτου δὴ διαμένει τὸν χειμῶνα μέχρι Κυνός. ἡ μὲν οὖν ὁμοιότης ὅτι στελεχόκαρπα καὶ ταῦτα· διαφοραὶ δὲ αἱ εἰρημέναι πρὸς τὴν συκάμινον.)

[5] Ἐν Αἰγύπτῳ δ' ἐστὶν ἕτερον ἢ περσέα καλούμενον, τῇ μὲν προσόψει μέγα καὶ καλόν, παραπλήσιον δὲ μάλιστα τῇ ἀπίῳ καὶ φύλλοις καὶ ἄνθεσι καὶ ἀκρεμόσι καὶ τῷ ὅλῳ σχήματι· πλὴν τὸ μὲν ἀείφυλλον τὸ δὲ φυλλοβόλον. καρπὸν δὲ φέρει πολὺν καὶ πᾶσαν ὥραν· περικαταλαμβάνει γὰρ ὁ νέος αἰεὶ τὸν ἔνον· πέττει δὲ ὑπὸ τοὺς ἐτησίας· τὸν δ' ἄλλον ὠμότερον ἀφαιροῦσι καὶ ἀποτιθέασιν. ἔστι δὲ τὸ μέγεθος ἡλικὸν ἄπιος, τῷ σχήματι δὲ πρόμακρος ἀμυγδαλώδης, χρῶμα δὲ αὐτοῦ ποιῶδες. ἔχει δὲ ἐντὸς κάρυον, ὥσπερ τὸ κοκκύμηλον, πλὴν ἔλαττον πολὺ καὶ μαλακώτερον· τὴν δὲ σάρκα γλυκεῖαν σφόδρα καὶ ἡδεῖαν καὶ εὐπεπτον· οὐδὲν γὰρ ἐνοχλεῖ πολὺν προσενεγκαμένων. εὗριζον δὲ τὸ δένδρον καὶ μήκει καὶ πάχει καὶ πλήθει πολὺ· ἔχει δὲ καὶ ξύλον ἰσχυρὸν καὶ καλὸν τῇ ὄψει μέλαν, ὥσπερ ὁ λωτός, ἐξ οὗ καὶ τὰ ἀγάλματα καὶ τὰ κλινία καὶ τραπέζια καὶ τᾶλλα τὰ τοιαῦτα ποιοῦσιν.

[6] Ἡ δὲ βάλανος ἔχει μὲν τὴν προσηγορίαν ἀπὸ τοῦ καρποῦ· φύλλον δ' αὐτῇ παραπλήσιον τῷ τῆς μυρρίνης πλὴν προμηκέστερον. ἔστι δὲ τὸ δένδρον εὐπαχὲς μὲν καὶ εὐμέγεθες, οὐκ εὐφυὲς δὲ ἀλλὰ παρεστραμμένον. τοῦ καρποῦ δὲ τοῖς κελύφεσι χρῶνται οἱ μυρεψοὶ κόπτοντες· εὐῶδες γὰρ ἔχει τὸν δὲ καρπὸν αὐτὸν ἀχρεῖον. ἔστι δὲ καὶ τῷ μεγέθει καὶ τῇ ὄψει παραπλήσιος τῷ τῆς καππάριος· ξύλον δὲ ἰσχυρὸν καὶ εἰς ἄλλα τε χρήσιμον καὶ εἰς τὰς ναυπηγίας.

[7] Τὸ δὲ καλούμενον κουκιάφορόν ἐστιν ὅμοιον τῷ φοίνικι· τὴν δὲ ὁμοιότητα κατὰ τὸ στελέχος ἔχει καὶ τὰ φύλλα· διαφέρει δὲ ὅτι ὁ μὲν φοῖνιξ μονοφυῆς καὶ ἀπλοῦν ἐστι, τοῦτο δὲ προσαυξηθὲν σχίζεται καὶ γίνεται δίκρουν, εἴτα πάλιν ἐκάτερον τούτων ὁμοίως· ἔτι δὲ τὰς ῥάβδους βραχείας ἔχει σφόδρα καὶ οὐ πολλὰς. χρῶνται δὲ τῷ φύλλῳ, καθάπερ τῷ φοίνικι, πρὸς τὰ πλέγματα. καρπὸν δὲ ἴδιον ἔχει πολὺ διαφέροντα καὶ μεγέθει καὶ σχήματι καὶ χυλῷ· μέγεθος μὲν γὰρ ἔχει σχεδὸν χειροπληθές· στρογγύλον δὲ καὶ οὐ προμήκη· χρῶμα ἐπίξανθον· χυλὸν δὲ γλυκὺν καὶ εὐστομον· οὐκ ἄθρόον δέ, ὥστερ ὁ φοῖνιξ, ἀλλὰ κεχωρισμένον καθ' ἓνα· πυρῆνα δὲ μέγαν καὶ σφόδρα σκληρόν, ἐξ οὗ τοὺς κρίκους торνεύουσι τοὺς εἰς τοὺς στρωματεῖς τοὺς διαποικίλους· διαφέρει δὲ πολὺ τὸ ξύλον τοῦ φοίνικος· τὸ μὲν γὰρ μανὸν καὶ ἰνῶδες καὶ χαῦνον, τὸ δὲ πυκνὸν καὶ βαρὺ καὶ σαρκῶδες καὶ διατμηθὲν οὖλον σφόδρα καὶ σκληρόν ἐστιν. καὶ οἱ γε δὴ Πέρσαι πάνυ ἐτίμων αὐτὸ καὶ ἐκ τούτου τῶν κλινῶν ἐποιοῦντο τοὺς πόδας.

[8] Ἡ δὲ ἄκανθα καλεῖται μὲν διὰ τὸ ἀκανθῶδες ὅλον τὸ δένδρον εἶναι πλὴν τοῦ στελέχους· καὶ γὰρ ἐπὶ τῶν ἀκρεμόνων καὶ ἐπὶ τῶν βλαστῶν καὶ ἐπὶ τῶν φύλλων ἔχει. μεγέθει δὲ μέγα, καὶ γὰρ δωδεκάπηχυς ἐξ αὐτῆς ἐρέψιμος ὕλη τέμνεται. διττὸν δὲ τὸ γένος αὐτῆς, ἡ μὲν γὰρ ἐστὶ λευκὴ ἡ δὲ μέλαινα· καὶ ἡ μὲν λευκὴ ἀσθενὴς τε καὶ εὐσηπτος· ἡ δὲ μέλαινα ἰσχυροτέρα τε καὶ ἄσηπτος, δι' ὃ καὶ ἐν ταῖς ναυπηγίαις χρῶνται πρὸς τὰ ἐγκοίλια αὐτῇ. τὸ δένδρον δὲ οὐκ ἄγαν ὀρθοφυές. ὁ δὲ καρπὸς ἔλλοβος, καθάπερ τῶν χεδροπῶν, ᾧ χρῶνται οἱ ἐγχώριοι πρὸς τὰ δέρματα ἀντὶ κηκίδος. τὸ δ' ἄνθος καὶ τῇ ὄψει καλόν, ὥστε καὶ στεφάνους ποιεῖν ἐξ αὐτοῦ, καὶ φαρμακῶδες, δι' ὃ καὶ συλλέγουσιν οἱ ἰατροί. γίνεται δὲ ἐκ ταύτης καὶ τὸ κόμμι· καὶ ῥέει καὶ πληγείσης καὶ αὐτόματον ἄνευ σχάσεως. ὅταν δὲ κοπῇ, μετὰ τρίτον ἔτος εὐθὺς ἀναβεβλάστηκε· πολὺ δὲ τὸ δένδρον ἐστὶ, καὶ δρυμὸς μέγας περὶ τὸν Θηβαϊκὸν νόμον, οὗπερ καὶ ἡ δρυς καὶ ἡ περσέα πλείστη καὶ ἡ ἐλάα.

[9] Καὶ γὰρ ἡ ἐλάα περὶ τοῦτον τὸν τόπον ἐστὶ, τῷ ποταμῷ μὲν οὐκ ἄρδευομένη, πλείω γὰρ ἢ τριακόσια στάδια ἀπέχει, ναματιαίοις δ' ὕδασιν· εἰσὶ γὰρ κρῆναι πολλαί. τὸ δ' ἔλαιον οὐδὲν χεῖρον τοῦ ἐνθάδε, πλὴν κακωδέστερον διὰ τὸ σπανίοις τοῖς ἀλσὶ χρῆσθαι· φύσει δὲ τὸ ξύλον τοῦ δένδρου καὶ σκληρόν καὶ παραπλήσιον τεμνόμενον τὴν χροάν τῷ λωτίνῳ.

[10] Ἄλλο δέ τι δένδρον ἡ κοκκυμηλέα, μέγα μὲν τῷ μεγέθει καὶ τὴν φύσιν τοῦ καρποῦ ὅμοιον τοῖς μεσπίλοις, καὶ τὸ μέγεθος παραπλήσιον πλὴν ἔχοντα πυρῆνα στρογγύλον· ἄρχεται δὲ ἀνθεῖν μηνὸς Πυανεσιῶνος, τὸν δὲ καρπὸν

πεπαίνειν περὶ ἡλίου τροπὰς χειμερινὰς· ἀείφυλλον δ' ἐστίν. οἱ δὲ περὶ τὴν Θηβαΐδα κατοικοῦντες διὰ τὴν ἀφθονίαν τοῦ δένδρου ξηραίνουσι τὸν καρπὸν καὶ τὸν πυρῆνα ἐξαιροῦντες κόπτουσι καὶ ποιοῦσι παλάθας.

[11] Ὑλῆμα δὲ ἴδιόν τι φύεται περὶ Μέμφιν, οὐ κατὰ φύλλα καὶ βλαστοὺς καὶ τὴν ὅλην μορφήν ἔχον τὸ ἴδιον ἀλλ' εἰς τὸ συμβαῖνον περὶ αὐτὸ πάθος· ἡ μὲν γὰρ πρόσοψις ἀκανθώδης ἐστὶν αὐτοῦ, καὶ τὸ φύλλον παρόμοιον ταῖς πτερίσιν· ὅταν δέ τις ἄψηται τῶν κλωνίων, ὥσπερ ἀφαναινόμενα τὰ φύλλα συμπίπτειν φασὶν εἴτα μετὰ τινα χρόνον ἀναβιώσκεισθαι πάλιν καὶ θάλλειν. καὶ τὰ μὲν ἴδια τῆς χώρας, ὅσα γ' ἂν δένδρα τις ἢ θάμνους εἴποι, τά γ' ἐπιφανέστατα ταῦτ' ἐστί. περὶ γὰρ τῶν ἐν τῷ ποταμῷ καὶ τοῖς ἔλεσιν ὕστερον ἐροῦμεν, ὅταν καὶ περὶ τῶν ἄλλων ἐνὺδρων.

[12] [Ἄπαντα δὲ ἐν τῇ χώρᾳ τὰ δένδρα τὰ τοιαῦτα μεγάλα καὶ τοῖς μήκεσι καὶ τοῖς πάχεσιν· ἐν γοῦν Μέμφιδι τηλικοῦτο δένδρον εἶναι λέγεται τὸ πάχος, ὃ τρεῖς ἄνδρες οὐ δύνανται περιλαμβάνειν. ἔστι δὲ καὶ τμηθὲν τὸ ξύλον καλόν· πυκνὸν τε γὰρ σφόδρα καὶ τῷ χρώματι λωτοειδές.]

[3.1] Ἐν Λιβύῃ δὲ ὁ λωτὸς πλεῖστος καὶ κάλλιστος καὶ ὁ παλίουρος καὶ ἐν τισὶ μέρεσι τῇ τε Νασαμωνικῇ καὶ παρ' Ἀμμωνι καὶ ἄλλοις ὁ φοῖνιξ· ἐν δὲ τῇ Κυρηναίᾳ κυπάρισσος καὶ ἐλάαι τε κάλλισται καὶ ἔλαιον πλεῖστον. ιδιώτατον δὲ πάντων τὸ σίλφιον· ἔτι κρόκον πολὺν ἡ χώρα φέρει καὶ εὖοσμον. ἔστι δὲ τοῦ λωτοῦ τὸ μὲν ὅλον δένδρον ἴδιον εὐμέγεθες ἡλίκον ἄπιος ἢ μικρὸν ἔλαττον· φύλλον δὲ ἐντομὰς ἔχον καὶ πρινωδες· τὸ μὲν ξύλον μέλαν· γένη δὲ αὐτοῦ πλείω διαφορὰς ἔχοντα τοῖς καρποῖς· ὁ δὲ καρπὸς ἡλίκος κύαμος, πεπαίνεται δέ, ὥσπερ οἱ βότρυες, μεταβάλλων τὰς χροιάς· φύεται δέ, καθάπερ τὰ μύρτα, παρ' ἄλληλα πυκνὸς ἐπὶ τῶν βλαστῶν· ἐσθιόμενος δ' ὁ ἐν τοῖς Λωτοφάγοις καλουμένοις γλυκὺς καὶ ἡδὺς καὶ ἀσινὴς καὶ ἔτι πρὸς τὴν κοιλίαν ἀγαθός· ἡδίων δ' ὁ ἀπύρηνος, ἔστι γὰρ καὶ τοιοῦτόν τι γένος· ποιοῦσι δὲ καὶ οἶνον ἐξ αὐτοῦ.

[2] Πολὺ δὲ τὸ δένδρον καὶ πολύκαρπον· τό γ' οὖν Ὀφέλλου στρατόπεδον, ἠνίκα ἐβάδιζεν εἰς Καρχηδόνα, καὶ τούτῳ φασὶ τραφῆναι πλείους ἡμέρας ἐπιλιπόντων τῶν ἐπιτηδείων. ἔστι μὲν οὖν καὶ ἐν τῇ νήσῳ τῇ Λωτοφαγίτιδι καλουμένη πολὺς· αὕτη δ' ἐπικείται καὶ ἀπέχει μικρόν· οὐ μὴν οὐθέν γε μέρος ἀλλὰ πολλῷ πλεῖον ἐν τῇ ἠπειρῷ· πλεῖστον γὰρ ὅλως ἐν τῇ Λιβύῃ, καθάπερ εἴρηται, τοῦτο καὶ ὁ παλίουρός ἐστιν· ἐν γὰρ Εὐεσπερίσι τούτοις καυσίμοις χρῶνται. διαφέρει δὲ οὗτος ὁ λωτὸς τοῦ παρὰ τοῖς Λωτοφάγοις.

[3] Ὁ δὲ παλίουρος θαμνωδέστερος τοῦ λωτοῦ· φύλλον δὲ παρόμοιον ἔχει

τῷ ἐνταῦθα, τὸν δὲ καρπὸν διάφορον· οὐ γὰρ πλατὺν ἀλλὰ στρογγύλον καὶ ἐρυθρόν, μέγεθος δὲ ἡλικὸν τῆς κέδρου ἢ μικρῷ μείζον· πυρῆνα δὲ ἔχει οὐ συννεσθιόμενον καθάπερ ταῖς ῥοαῖς· ἥδὺν δὲ τὸν καρπὸν· καὶ ἕαν τις οἶνον ἐπιχέῃ καὶ αὐτὸν ἡδίω γίνεσθαι φασὶ καὶ τὸν οἶνον ἡδίω ποιεῖν.

[4] Ἔνιοι δὲ τὸ τοῦ λωτοῦ δένδρον θαμνωδὲς εἶναι καὶ πολύκλαδον, τῷ στελέχει δὲ εὐπαχές· τὸν δὲ καρπὸν μέγα τὸ κάρυον ἔχειν· τὸ δ' ἐκτὸς οὐ σαρκῶδες ἀλλὰ δερματωδέστερον· ἐσθιόμενον δὲ οὐχ οὕτω γλυκὺν ὡς εὖστομον· καὶ τὸν οἶνον ὃν ἐξ αὐτοῦ ποιοῦσιν οὐ διαμένειν ἀλλ' ἢ δύο ἢ τρεῖς ἡμέρας εἴτ' ὀξύνειν. ἡδίω μὲν οὖν τὸν καρπὸν τὸν ἐν τοῖς Λωτοφάγοις, ξύλον δὲ κάλλιον τὸ ἐν Κυρηναίᾳ· θερμότεραν δὲ εἶναι τὴν χώραν τὴν τῶν Λωτοφάγων· τοῦ ξύλου δὲ τὴν ρίζαν εἶναι μελαντέραν μὲν πολὺ πυκνὴν δὲ ἥττον καὶ εἰς ἐλάττω χρησίμην· εἰς γὰρ τὰ ἐγχειρίδια καὶ τὰ ἐπικολλήματα χρῆσθαι, τῷ ξύλῳ δὲ εἰς τε τοὺς αὐλοὺς καὶ εἰς ἄλλα πλείω.

[5] Ἐν δὲ τῇ μὴ ὑομένη τῆς Λιβύης ἄλλα τε πλείω φύεσθαι καὶ φοίνικας μεγάλους καὶ καλοὺς· οὐ μὴν ἀλλ' ὅπου μὲν φοῖνιξ ἀλμυρίδα τε εἶναι καὶ ἔφυδρον τὸν τόπον, οὐκ ἐν πολλῷ δὲ βάθει ἀλλὰ μάλιστα ἐπ' ὀργυῖαις τρισίν. τὸ δ' ὕδωρ ἔνθα μὲν γλυκὺ σφόδρα ἔνθα δὲ ἀλυκὸν πλησίον ὄντων ἀλλήλοις· ὅπου δὲ τὰ ἄλλα φύεται ξηρὸν καὶ ἄνυδρον· ἐνιαχοῦ δὲ καὶ τὰ φρέατα εἶναι ἑκατὸν ὀργυῖων, ὥστε ὑποζυγίοις ἀπὸ τροχηλιάς ἀνιμᾶν· δι' ὃ καὶ θαυμαστὸν πῶς ποτε ὠρύχθη τηλικαῦτα βάθη· τὸ δ' οὖν τῶν ὑδάτων τῶν ὑπὸ τοῦς φοίνικας καὶ ἐν Ἀμμωνος εἶναι διαφορὰν ἔχον τὴν εἰρημένην. φύεσθαι δὲ ἐν τῇ μὴ ὑομένη τὸ θύμον πολὺ καὶ ἄλλα ἴδια τε καὶ πλείω γίνεσθαι ἐνταῦθα, καὶ πτῶκα καὶ δορκάδα καὶ στρουθὸν [6] καὶ ἕτερα τῶν θηρίων. ἀλλὰ ταῦτα μὲν ἄδηλον εἰ ἐκτοπίζει πού πινόμενα· (διὰ γὰρ τὸ τάχος δύναται μακράν τε καὶ ταχὺ παραγενέσθαι), ἄλλως τε καὶ δι' ἡμερῶν τινῶν πίνουσι, καθάπερ καὶ τὰ ἡμέρα παρὰ τρίτην ἢ τετάρτην ποτίζεται ταῦτα· τὸ δὲ τῶν ἄλλων ζώων, οἶον ὄφεων σαυρῶν καὶ τῶν τοιούτων, φανερόν ὅτι ἅποτα. τοὺς δὲ Λίβυας λέγειν ὅτι τὸν ὄνον ἐσθίει ταῦτα ὃς καὶ παρ' ἡμῖν γίνεται, πολὺπουν τε καὶ μέλαν συσπειρώμενον εἰς ἑαυτό· τοῦτον δὲ πολὺν τε γίνεσθαι σφόδρα καὶ ὕγρον τὴν φύσιν εἶναι.

[7] Δρόσον δὲ αἰεὶ πίπτειν ἐν τῇ μὴ ὑομένη πολλήν, ὥστε δῆλον ὅτι τὸν μὲν φοίνικα καὶ εἴ τι ἄλλο φύεται ἐν ἀνύδροις τό τε ἐκ τῆς γῆς ἀνιὸν ἐκτρέφει καὶ πρὸς τούτῳ ἢ δρόσος. ἱκανὴ γὰρ ὡς κατὰ μεγέθη καὶ τὴν φύσιν αὐτῶν ξηρὰν οὖσαν καὶ ἐκ τοιούτων συνεσθηκυῖαν. καὶ δένδρα μὲν ταῦτα πλεῖστα καὶ ἰδιώτατα. περὶ δὲ τοῦ σιλφίου λεκτέον ὕστερον ποῖόν τι τὴν φύσιν.

[4.1] Ἐν δὲ τῇ Ἀσίᾳ παρ' ἐκάστοις ἴδι' ἅττα τυγχάνει· τὰ μὲν γὰρ φέρουσιν αἱ χῶραι τὰ δ' οὐ φύουσιν· οἷον κιττὸν καὶ ἐλάαν οὐ φασιν εἶναι τῆς Ἀσίας ἐν τοῖς ἄνω τῆς Συρίας ἀπὸ θαλάττης πένθ' ἡμερῶν· ἀλλ' ἐν Ἰνδοῖς φανῆναι κιττὸν ἐν τῷ ὄρει τῷ Μηρῷ καλουμένῳ, ὅθεν δὴ καὶ τὸν Διόνυσον εἶναι μυθολογοῦσι. δι' ὃ καὶ Ἀλέξανδρος ἀπ' ἐξοδίας λέγεται ἀπιὼν ἐστεφανωμένος κιττῷ εἶναι καὶ αὐτὸς καὶ ἡ στρατιὰ· τῶν δὲ ἄλλων ἐν Μηδίᾳ μόνον· περικλείειν γὰρ αὕτη δοκεῖ καὶ συνάπτειν πως τῷ Πόντῳ. καίτοι γε διεφιλοτιμήθη Ἄρπαλος ἐν τοῖς παραδείσοις τοῖς περὶ Βαβυλῶνα φυτεύων πολλάκις καὶ πραγματευόμενος, ἀλλ' οὐδὲν ἐποίει πλεόν· οὐ γὰρ ἐδύνατο ζῆν ὥσπερ τᾶλλα τὰ ἐκ τῆς Ἑλλάδος. τοῦτο μὲν οὖν οὐ δέχεται ἡ χώρα διὰ τὴν τοῦ ἀέρος κρᾶσιν· ἀναγκαίως δὲ δέχεται καὶ πύξον καὶ φύλوران· καὶ γὰρ περὶ ταῦτα πονοῦσιν οἱ ἐν τοῖς παραδείσοις. ἕτερα δὲ ἴδια φέρει καὶ δένδρα [2] καὶ ὑλήματα· καὶ ἔοικεν ὅλως ὁ τόπος ὁ πρὸς ἀνατολὰς καὶ μεσημβρίαν ὥσπερ καὶ ζῶα καὶ φυτὰ φέρειν ἴδια παρὰ τοὺς ἄλλους· οἷον ἢ τε Μηδία χώρα καὶ Περσίς ἄλλα τε ἔχει πλείω καὶ τὸ μῆλον τὸ Μηδικὸν ἢ τὸ Περσικὸν καλούμενον. ἔχει δὲ τὸ δένδρον τοῦτο φύλλον μὲν ὅμοιον καὶ σχεδὸν ἴσον τῷ τῆς ἀνδράχλης, ἀκάνθας δὲ οἷας ἄπιος ἢ ὀξυάκανθος, λείας δὲ καὶ ὀξείας σφόδρα καὶ ἰσχυράς· τὸ δὲ μῆλον οὐκ ἐσθιέται μὲν, εὖοσμον δὲ πάνυ καὶ τὸ φύλλον τοῦ δένδρου· κἂν εἰς ἱμάτια τεθῇ τὸ μῆλον ἄκοπα διατηρεῖ. χρήσιμον δ' ἐπειδὴν τύχη <τις> πεπωκὼς φάρμακον <θανάσιμον·> δοθὲν γὰρ ἐν οἴνῳ διακόπτει τὴν κοιλίαν καὶ ἐξάγει τὸ φάρμακον·> καὶ πρὸς στόματος εὐωδίαν· ἐὰν γάρ τις ἐψήσῃ ἐν ζωμῷ, ἢ ἐν ἄλλῳ τινὶ τὸ ἔσωθεν τοῦ μήλου ἐκπιέσῃ εἰς τὸ στόμα καὶ καταροφήσῃ, ποιεῖ τὴν ὀσμὴν ἠδεῖαν.

[3] σπεῖρεται δὲ τοῦ ἥρος εἰς πρασιάς ἐξαιρεθὲν τὸ σπέρμα διειργασμένας ἐπιμελῶς, εἴτα ἀρδεύεται διὰ τετάρτης ἢ πέμπτης ἡμέρας· ὅταν δὲ ἀδρὸν ᾖ, διαφυτεύεται πάλιν τοῦ ἔαρος εἰς χωρίον μαλακὸν καὶ ἔφυδρον καὶ οὐ λίαν λεπτόν· φιλεῖ γὰρ τὰ τοιαῦτα. φέρει δὲ τὰ μῆλα πᾶσαν ὥραν· τὰ μὲν γὰρ ἀφήρηται τὰ δὲ ἀνθῇ τὰ δὲ ἐκπέττει. τῶν δὲ ἀνθῶν ὅσα, ὥσπερ εἵπομεν, ἔχει καθάπερ ἡλακάτην ἐκ μέσου τιν' ἐξέχουσιν, ταῦτά ἐστι γόνιμα, ὅσα δὲ μὴ ἄγονα. σπεῖρεται δὲ καὶ εἰς ὄστρακα διατετρημένα, καθάπερ καὶ οἱ φοίνικες. τοῦτο μὲν οὖν, ὥσπερ εἴρηται, περὶ τὴν Περσίδα καὶ τὴν Μηδίαν ἐστίν.

[4] Ἡ δὲ Ἰνδικὴ χώρα τὴν τε καλουμένην ἔχει συκὴν, ἢ καθίησιν ἐκ τῶν κλάδων τὰς ρίζας ἀν' ἕκαστον ἔτος, ὥσπερ εἴρηται πρότερον· ἀφήησι δὲ οὐκ ἐκ τῶν νέων ἀλλ' ἐκ τῶν ἔνων καὶ ἔτι παλαιότερων· αὗται δὲ συνάπτουσιν τῇ γῇ ποιοῦσιν ὥσπερ δρύφακτον κύκλῳ περὶ τὸ δένδρον, ὥστε γίνεσθαι

καθάπερ σκηνήν, οὗ δὴ καὶ εἰώθασι διατρίβειν. εἰσὶ δὲ αἱ ῥίζαι φνόμεναι διάδηλοι πρὸς τοὺς βλαστούς· λευκότεραι γὰρ καὶ δασεῖαι καὶ σκολιαί καὶ ἄφυλλοι. ἔχει δὲ καὶ τὴν ἄνω κόμην πολλήν, καὶ τὸ ὅλον δένδρον εὐκυκλον καὶ τῷ μεγέθει μέγα σφόδρα· καὶ γὰρ ἐπὶ δύο στάδια ποιεῖν φασι τὴν σκιάν· καὶ τὸ πάχος τοῦ στελέχους ἔνια πλειόνων ἢ ἐξήκοντα βημάτων, τὰ δὲ πολλὰ τετταράκοντα. τὸ δέ γε φύλλον οὐκ ἔλαττον ἔχει πέλτης, καρπὸν δὲ σφόδρα μικρὸν ἡλικὸν ἐρέβινθον ὅμοιον δὲ σύκῳ· δι' ὃ καὶ ἐκάλουν αὐτὸ οἱ Ἕλληνες συκῆν· ὀλίγον δὲ θαυμαστῶς τὸν καρπὸν οὐχ ὅτι κατὰ τὸ τοῦ δένδρου μέγεθος ἀλλὰ καὶ τὸ ὅλον. φύεται δὲ καὶ τὸ δένδρον περὶ τὸν Ἀκεσίνην ποταμόν.

[5] Ἔστι δὲ καὶ ἕτερον δένδρον καὶ τῷ μεγέθει μέγα καὶ ἡδύκαρπον θαυμαστῶς καὶ μεγαλόκαρπον· καὶ χρῶνται τροφῇ τῶν Ἰνδῶν οἱ σοφοὶ καὶ μὴ ἀμπεχόμενοι.

Ἄτερον δὲ οὗ τὸ φύλλον τὴν μὲν μορφήν πρόμηκες τοῖς τῶν στρουθῶν περοῖς ὅμοιον, ἃ παρατίθενται παρὰ τὰ κράνη, μῆκος δὲ ὡς διπηχυαῖον.

Ἄλλο τέ ἐστιν οὗ ὁ καρπὸς μακρὸς καὶ οὐκ εὐθύς ἀλλὰ σκολιὸς ἐσθιόμενος δὲ γλυκύς. οὗτος ἐν τῇ κοιλίᾳ δηγμὸν ἐμποιεῖ καὶ δυσεντερίαν, δι' ὃ Ἀλέξανδρος ἀπεκήρυξε μὴ ἐσθίειν. ἔστι δὲ καὶ ἕτερον οὗ ὁ καρπὸς ὅμοιος τοῖς κρανέοις.

Καὶ ἕτερα δὲ πλείω καὶ διαφέροντα τῶν ἐν τοῖς Ἕλλησιν ἄλλ' ἀνώνυμα. θαυμαστὸν δ' οὐδὲν τῆς ιδιότητος· σχεδὸν γάρ, ὥς γε δὴ τινὲς φασι, οὐθὲν ὅλως τῶν δένδρων οὐδὲ τῶν ὕλημάτων οὐδὲ τῶν ποιωδῶν ὁμοίον ἐστι τοῖς ἐν τῇ Ἑλλάδι πλὴν ὀλίγων.

[6] Ἴδιον δὲ καὶ ἡ ἐβένη τῆς χώρας ταύτης· ταύτης δὲ δύο γένη, τὸ μὲν εὖξυλον καὶ καλὸν τὸ δὲ φαῦλον. σπάνιον δὲ τὸ καλὸν θάτερον δὲ πολὺ. τὴν δὲ χροάν οὐ θησαυριζομένη λαμβάνει τὴν εὐχρουν ἀλλ' εὐθύς τῇ φύσει. ἔστι δὲ τὸ δένδρον θαμνώδες, ὥσπερ ὁ κύτισος.

[7] Φασι δ' εἶναι καὶ τέρμινθον, οἱ δ' ὅμοιον τερμίνθῳ, ὃ τὸ μὲν φύλλον καὶ τοὺς κλῶνας καὶ τᾶλλα πάντα ὅμοια ἔχει τῇ τερμίνθῳ τὸν δὲ καρπὸν διάφορον· ὅμοιον γὰρ ταῖς ἀμυγδαλαῖς. εἶναι γὰρ καὶ ἐν Βάκτροις τὴν τέρμινθον ταύτην καὶ κάρνα φέρειν ἡλίκᾳ ἀμύγδαλα διὰ τὸ μὴ μεγάλα· καὶ τῇ ὄψει δὲ παρόμοια, πλὴν τὸ κέλυφος οὐ τραχύ, τῇ δ' εὐστομία καὶ ἡδονῇ κρείττω τῶν ἀμυγδάλων. δι' ὃ καὶ χρῆσθαι τοὺς ἐκεῖ μᾶλλον.

[8] Ἐξ ὧν δὲ τὰ ἱμάτια ποιοῦσι τὸ μὲν φύλλον ὅμοιον ἔχει τῇ συκαμίνῳ, τὸ δὲ ὅλον φυτὸν τοῖς κυνορόδοις ὅμοιον. φυτεύουσι δὲ ἐν τοῖς πεδίοις αὐτὸ κατ'

ὄρχους, δι' ὃ καὶ πόρρωθεν ἀφορῶσι ἄμπελοι φαίνονται. ἔχει δὲ καὶ φοίνικας ἔνια μέρη πολλούς. καὶ ταῦτα μὲν ἐν δένδρου φύσει.

[9] Φέρει δὲ καὶ σπέρματα ἴδια, τὰ μὲν τοῖς χεδροποῖς ὅμοια τὰ δὲ τοῖς πυροῖς καὶ ταῖς κριθαῖς. ἐρέβινθος μὲν γὰρ καὶ φακὸς καὶ τᾶλλα τὰ παρ' ἡμῖν οὐκ ἔστιν· ἕτερα δ' ἐστὶν ὥστε παραπλήσια ποιεῖν τὰ ἐνρήματα καὶ μὴ διαγιγνώσκειν, ὥς φασιν, ἂν μὴ τις ἀκούσῃ. κριθαὶ δὲ καὶ πυροὶ καὶ ἄλλο τι γένος ἀγρίων κριθῶν, ἐξ ὧν καὶ ἄρτοι ἡδεῖς καὶ χόνδρος καλός. ταύτας οἱ ἵπποι ἐσθίωντες τὸ πρῶτον διεφθείροντο, κατὰ μικρὸν δὲ οὖν ἐθισθέντες ἐν ἀχύροις οὐδὲν ἔπασχον.

[10] Μάλιστα δὲ σπείρουσι τὸ καλούμενον ὄρυζον, ἐξ οὗ τὸ ἔψημα. τοῦτο δὲ ὅμοιον τῇ ζεῖᾳ καὶ περιπτισθὲν οἶον χόνδρος εὐπεπτον δέ, τὴν ὄψιν πεφυκὸς ὅμοιον ταῖς αἴραις καὶ τὸν πολὺν χρόνον ἐν ὕδατι, ἀποχεῖται δὲ οὐκ εἰς στάχυν ἀλλ' οἶον φόβην, ὥσπερ ὁ κέγχρος καὶ ὁ ἔλυμος. ἄλλο δὲ ὃ ἐκάλουν οἱ Ἕλληνες φακόν· τοῦτο δὲ ὅμοιον μὲν τῇ ὄψει καὶ τὸ βούκερας, θερίζεται δὲ περὶ Πλειάδος δύσιν.

[11] Διαφέρει δὲ καὶ αὕτη ἡ χώρα τῷ τὴν μὲν φέρειν ἔνια τὴν δὲ μὴ φέρειν· ἡ γὰρ ὀρεινὴ καὶ ἄμπελον ἔχει καὶ ἐλάαν καὶ τὰ ἄλλα ἀκρόδρυα· πλὴν ἄκαρπον τὴν ἐλάαν, καὶ σχεδὸν καὶ τὴν φύσιν ὥσπερ μεταξὺ κοτίνου καὶ ἐλάας ἐστὶ καὶ τῇ ὅλῃ μορφῇ· καὶ τὸ φύλλον τοῦ μὲν πλατύτερον τοῦ δὲ στενότερον. ταῦτα μὲν οὖν κατὰ τὴν Ἰνδικήν.

[12] Ἐν δὲ τῇ Ἀρίᾳ χώρᾳ καλουμένην ἄκανθᾶ ἐστίν, ἐφ' ἧς γίνεται δάκρυον ὅμοιον τῇ σμύρνῃ καὶ τῇ ὄψει καὶ τῇ ὁσμῇ· τοῦτο δὲ ὅταν ἐπιλάμψῃ ὁ ἥλιος καταρρεῖ. πολλὰ δὲ καὶ ἄλλα παρὰ τὰ ἐνταῦθα καὶ ἐν τῇ χώρᾳ καὶ ἐν τοῖς ποταμοῖς γίνεται. ἐν ἐτέροις δὲ τόποις ἐστὶν ἄκανθα λευκὴ τρίοζος, ἐξ ἧς καὶ σκυτάλια καὶ βακτηρίας ποιοῦσιν· ὁπώδης δὲ καὶ μανή· ταύτην δὲ καλοῦσιν Ἡρακλέους.

Ἄλλο δὲ ὕλημα μέγεθος μὲν ἡλίκον ράφανος, τὸ δὲ φύλλον ὅμοιον δάφνῃ καὶ τῷ μεγέθει καὶ τῇ μορφῇ. τοῦτο δ' εἴ τι φάγοι ἐναποθνήσκει. δι' ὃ καὶ ὅπου ἵπποι τούτους ἐφύλαττον διὰ χειρῶν.

[13] Ἐν δὲ τῇ Γεδρωσίᾳ χώρᾳ πεφυκέναι φασὶν ἐν μὲν ὅμοιον τῇ δάφνῃ φύλλον ἔχον, οὗ τὰ ὑποζύγια καὶ ὅτιοῦν εἰ φάγοι μικρὸν ἐπισχόντα διεφθείροντο παραπλησίως διατιθέμενα καὶ σπώμενα ὁμοίως τοῖς ἐπιλήπτοις.

Ἔτερον δὲ ἄκανθάν τινα εἶναι· ταύτην δὲ φύλλον μὲν οὐδὲν ἔχειν πεφυκέναι δ' ἐκ μιᾶς ρίζης· ἐφ' ἐκάστῳ δὲ τῶν ὄζων ἄκανθαν ἔχειν ὀξεῖαν σφόδρα, καὶ τούτων δὲ καταγνυμένων ἢ προστριβομένων ὁπὸν ἐκρεῖν πολύν,

ὅς ἀποτυφλοῖ τᾷλλα ζῶα πάντα καὶ πρὸς τοὺς ἀνθρώπους εἴ τις προσραίνειεν αὐτοῖς. ἐν δὲ τόποις τισὶ πεφυκέναι τινὰ βοτάνην, ὅφ' ἥ συνεσπειρωμένους ὄφεις εἶναι μικροὺς σφόδρα· τούτοις δ' εἴ τις ἐμβὰς πληγείη θνήσκειν. ἀποπνίγεσθαι δὲ καὶ ἀπὸ τῶν φοινίκων τῶν ὠμῶν εἴ τις φάγοι, καὶ τοῦτο ὕστερον κατανοηθῆναι. τοιαῦται μὲν οὖν δυνάμεις καὶ ζώων καὶ φυτῶν ἴσως καὶ παρ' ἄλλοις εἰσὶ.

[14] Περιττότερα δὲ τῶν φυομένων καὶ πλεῖστον ἐξηλλαγμένα πρὸς τὰ ἄλλα τὰ εὖοσμα τὰ περὶ Ἀραβίαν καὶ Συρίαν καὶ Ἰνδοὺς, οἷον ὃ τε λιβανωτὸς καὶ ἡ σμύρνα καὶ ἡ κασία καὶ τὸ ὀποβάλασμον καὶ τὸ κινάμωμον καὶ ὅσα ἄλλα τοιαῦτα· περὶ ὧν ἐν ἄλλοις εἴρηται διὰ πλειόνων. ἐν μὲν οὖν τοῖς πρὸς ἔω τε καὶ μεσημβρίαν καὶ ταῦτ' ἴδια καὶ ἕτερα δὲ τούτων πλείω ἐστίν.

[5.1] Ἐν δὲ τοῖς πρὸς ἄρκτον οὐχ ὁμοίως· οὐθὲν γὰρ ὅτι ἄξιον λόγου λέγεται παρὰ τὰ κοινὰ τῶν δένδρων ἃ καὶ φιλόψυχρά τε τυγχάνει καὶ ἔστι καὶ παρ' ἡμῖν, οἷον πεύκη δρυὸς ἐλάτη πύξος διοσβάλανος φίλυρα καὶ τὰ ἄλλα δὲ τὰ τοιαῦτα· σχεδὸν γὰρ οὐδὲν ἕτερον παρὰ ταῦτά ἐστιν, ἀλλὰ τῶν ἄλλων ὑλημάτων ἓν ἃ τοὺς ψυχροὺς μᾶλλον ζητεῖ τόπους, καθάπερ κενταύριον ἀνίνθιον, ἔτι δὲ τὰ φαρμακώδη ταῖς ρίζαις καὶ τοῖς ὁποῖς, οἷον ἐλλέβορος ἐλατήριον σκαμμωνία, σχεδὸν πάντα τὰ ριζοτομούμενα.

[2] Τὰ μὲν γὰρ ἐν τῷ Πόντῳ καὶ τῇ Θράκῃ γίνεται, τὰ δὲ περὶ τὴν Οἴτην καὶ τὸν Παρνασὸν καὶ τὸ Πήλιον καὶ τὴν Ὀσσαν καὶ τὸ Τελέθριον· καὶ ἐν τούτοις δὲ τινὲς φασὶ πλεῖστον· πολλὰ δὲ καὶ ἐν τῇ Ἀρκαδίᾳ καὶ ἐν τῇ Λακωνικῇ· φαρμακώδεις γὰρ καὶ αὗται. τῶν δὲ εὐωδῶν οὐδὲν ἐν ταύταις, πλην ἱρίς ἐν τῇ Ἰλλυρίδι καὶ περὶ τὸν Ἀδρίαν· ταύτῃ γὰρ χρηστὴ καὶ πολὺ διαφέρουσα τῶν ἄλλων· ἀλλ' ἐν τοῖς ἀλεινοῖς καὶ τοῖς πρὸς μεσημβρίαν ὥσπερ ἀντικείμενα τὰ εὐώδη. ἔχουσι δὲ καὶ κυπάριττον οἱ ἀλεινοὶ μᾶλλον, ὥσπερ Κρήτη Λυκία Ῥόδος, κέδρον δὲ καὶ τὰ Θράκῃ ὄρη καὶ τὰ Φρύγια.

[3] Τῶν δὲ ἡμερουμένων ἥκιστα φασὶν ἐν τοῖς ψυχροῖς ὑπομένειν δάφνην καὶ μυρρίνην, καὶ τούτων δὲ ἥττον ἔτι τὴν μυρρίνην· σημεῖον δὲ λέγουσιν ὅτι ἐν τῷ Ὀλύμπῳ δάφνη μὲν πολλή, μύρρινος δὲ ὅλως οὐκ ἔστιν. ἐν δὲ τῷ Πόντῳ περὶ Παντικάπαιον οὐδ' ἕτερον καίπερ σπουδαζόντων καὶ πάντα μηχανωμένων πρὸς τὰς ἱεροσύνας· συκαὶ δὲ πολλαὶ καὶ εὐμεγέθεις καὶ ροιαὶ δὲ περισκεπαζόμεναι· ἄπιοι δὲ καὶ μηλέαι πλεῖστοι καὶ παντοδαπάταται καὶ χρησταί· αὗται δ' ἐαριναὶ πλην εἰ ἄρα ὅσφαι· τῆς δὲ ἀγρίας ὕλης ἐστὶ δρυὸς πτελέα μελία καὶ ὅσα τοιαῦτα· πεύκη δὲ καὶ ἐλάτη καὶ πίτυς οὐκ ἔστιν οὐδὲ ὅλως οὐδὲν ἔνδαδον· ὕγρα δὲ αὕτη καὶ χεῖρων πολὺ τῆς Σινωπικῆς, ὥστ' οὐδὲ

πολὺν χρόνον αὐτῇ πλὴν πρὸς τὰ ὑπαίθρια. ταῦτα μὲν οὖν περὶ τὸν Πόντον ἢ ἐν τισὶ γε τόποις αὐτοῦ.

[4] Ἐν δὲ τῇ Προποντίδι γίνεται καὶ μύρρινος καὶ δάφνη πολλαχοῦ ἐν τοῖς ὄρεσιν. ἴσως δ' ἔνια καὶ τῶν τόπων ἴδια θετέον· ἕκαστοι γὰρ ἔχουσι τὰ διαφέροντα, ὥσπερ εἴρηται, κατὰ τὰς ὕλας οὐ μόνον τῷ βελτίῳ καὶ χεῖρῳ τὴν αὐτὴν ἔχειν ἀλλὰ καὶ τῷ φέρειν ἢ μὴ φέρειν· οἷον ὁ μὲν Τιμῶλος ἔχει καὶ ὁ Μύσιος Ὀλυμπος πολὺ τὸ κάρυον καὶ τὴν διοςβάλανον, ἔτι δὲ ἄμπελον καὶ μηλέαν καὶ ῥόαν· ἡ δὲ Ἰδὴ τὰ μὲν οὐκ ἔχει τούτων τὰ δὲ σπάνια· περὶ δὲ Μακεδονίαν καὶ τὸν Πιερικὸν Ὀλυμπον τὰ μὲν ἔστι τὰ δ' οὐκ ἔστι τούτων· ἐν δὲ τῇ Εὐβοίᾳ καὶ περὶ τὴν Μαγνησίαν τὰ μὲν Εὐβοϊκὰ πολλὰ τῶν δὲ ἄλλων οὐθέν· οὐδὲ δὴ περὶ τὸ Πέλιον οὐδὲ τὰ ἄλλα τὰ ἐνταῦθα ὄρη.

[5] Βραχὺς δ' ἐστὶ τόπος ὃς ἔχει καὶ ὅλως τὴν ναυπηγήσιμον ὕλην· τῆς μὲν γὰρ Εὐρώπης δοκεῖ τὰ περὶ τὴν Μακεδονίαν καὶ ὅσα τῆς Θράκης καὶ περὶ Ἰταλίαν· τῆς δὲ Ἀσίας τὰ τε ἐν Κιλικίᾳ καὶ τὰ ἐν Σινώπῃ καὶ Ἀμίσῳ, ἔτι δὲ ὁ Μύσιος Ὀλυμπος καὶ ἡ Ἰδὴ πλὴν οὐ πολλήν· ἡ γὰρ Συρία κέδρον ἔχει καὶ ταύτῃ χρόνεται πρὸς τὰς τριήρεις.

[6] Ἀλλὰ καὶ τὰ φίλυδρα καὶ τὰ παραποτάμια ταῦθ' ὁμοίως· ἐν μὲν γὰρ τῷ Ἀδρίᾳ πλάτανον οὗ φασιν εἶναι πλὴν περὶ τὸ Διομήδους ἱερόν· σπανίαν δὲ καὶ ἐν Ἰταλίᾳ πάσῃ· καίτοι πολλοὶ καὶ μεγάλοι ποταμοὶ παρ' ἀμφοῖν· ἀλλ' οὐκ ἔοικε φέρειν ὁ τόπος· ἐν Ῥηγίῳ γοῦν ἅς Διονύσιος πρεσβύτερος ὁ τύραννος ἐφύτευσεν ἐν τῷ παραδείσῳ, αἱ εἰσι νῦν ἐν τῷ γυμνασίῳ, φιλοτιμηθεῖσαι οὐ δεδύνηνται λαβεῖν μέγεθος.

[7] Ἐνιοὶ δὲ πλείστην ἔχουσι πλάτανον, οἱ δὲ πετελέαν καὶ ἰτέαν, οἱ δὲ μυρίκην, ὥσπερ ὁ Αἴμιος. ὥστε τὰ μὲν τοιαῦτα, καθάπερ ἐλέχθη, τῶν τόπων ἴδια θετέον ὁμοίως ἐν τε τοῖς ἀγρίοις καὶ τοῖς ἡμέροις. οὐ μὴν ἀλλὰ τάχ' ἂν εἴη καὶ τούτων ἐπὶ τινων ὥστε διακοσμηθέντων δύνασθαι τὴν χώραν φέρειν, ὃ καὶ νῦν ξυμβαῖνον ὁρῶμεν καὶ ἐπὶ ζώων ἐνίων καὶ φυτῶν.

[6.1] Μεγίστην δὲ διαφορὰν αὐτῆς τῆς φύσεως τῶν δένδρων καὶ ἀπλῶς τῶν ὑλημάτων ὑποληπτέον ἦν καὶ πρότερον εἵπομεν, ὅτι τὰ μὲν ἔγγαία τὰ δ' ἐνυδρά τυγχάνει, καθάπερ τῶν ζώων, καὶ τῶν φυτῶν· οὐ μόνον ἐν τοῖς ἔλεσι καὶ ταῖς λίμναις καὶ τοῖς ποταμοῖς γὰρ ἀλλὰ καὶ ἐν τῇ θαλάττῃ φύεται καὶ ὑλήματα ἔνια ἐν τε τῇ ἕξῳ καὶ δένδρα· ἐν μὲν γὰρ τῇ περὶ ἡμᾶς μικρὰ πάντα τὰ φυόμενα, καὶ οὐδὲν ὑπερέχον ὥς εἰπεῖν τῆς θαλάττης· ἐν ἐκείνῃ δὲ καὶ τὰ τοιαῦτα καὶ ὑπερέχοντα, καὶ ἕτερα δὲ μείζω δένδρα.

[2] Τὰ μὲν οὖν περὶ ἡμᾶς ἐστὶ τάδε· φανερώτατα μὲν καὶ κοινότατα πᾶσιν

τό τε φῦκος καὶ τὸ βρύον καὶ ὅσα ἄλλα τοιαῦτα· φανερώτατα δὲ καὶ ιδιώτατα κατὰ τοὺς τόπους ἐλάτη συκῇ δρυὶς ἄμπελος φοῖνιξ. τούτων δὲ τὰ μὲν πρόσγεια τὰ δὲ πόντια τὰ δ' ἀμφοτέρων τῶν τόπων κοινά. καὶ τὰ μὲν πολυειδῆ, καθάπερ τὸ φῦκος, τὰ δὲ μίαν ιδεάν ἔχοντα. τοῦ γὰρ φύκους τὸ μὲν ἐστὶ πλατύφυλλον ταινιοειδὲς χρῶμα ποῶδες ἔχον, ὃ δὴ καὶ πράσον καλοῦσιν τινες, οἱ δὲ ζωστήρα· ρίζαν δὲ ἔχει δασεῖαν ἔξωθεν ἔνδοθεν δὲ λευριώδη, μακρὰν δὲ ἐπικλῶς καὶ εὐπαχῇ παρομοίαν τοῖς κρομουγητείσι.

[3] Τὸ δὲ τριχόφυλλον, ὥσπερ τὸ μάραθον, οὐ ποῶδες ἀλλ' ἔξωχρον οὐδὲ ἔχον καυλὸν ἀλλ' ὀρθόν πως ἐν αὐτῷ· φύεται δὲ τοῦτο ἐπὶ τῶν ὀστράκων καὶ τῶν λίθων, οὐχ ὥσπερ θάτερον πρὸς τῇ γῇ· πρόσγεια δ' ἄμφω, καὶ τὸ μὲν τριχόφυλλον πρὸς αὐτῇ τῇ γῇ, πολλάκις δὲ ὥσπερ ἐπικλύζεται μόνον ὑπὸ τῆς θαλάττης, θάτερον δὲ ἀνωτέρω.

[4] Γίνεται δὲ ἐν μὲν τῇ ἔξω τῇ περὶ Ἡρακλέους στήλας θαυμαστόν τι τὸ μέγεθος, ὥς φασι, καὶ τὸ πλάτος μεῖζον ὥς παλαιστιαῖον. φέρεται δὲ τοῦτο εἰς τὴν ἔσω θάλατταν ἅμα τῷ ῥῷ τῷ ἔξωθεν καὶ καλοῦσιν αὐτὸ πράσον· ἐν αὐτῇ δ' ἐν τισὶ τόποις ὥστ' ἐπάνω τοῦ ὀμφαλοῦ. λέγεται δὲ ἐπέτειον εἶναι καὶ φύεσθαι μὲν τοῦ ἥρος λήγοντος, ἀκμάζειν δὲ τοῦ θέρους, τοῦ μετοπώρου δὲ φθίνειν, κατὰ δὲ τὸν χειμῶνα ἀπόλλυσθαι καὶ ἐκπίπτειν. ἅπαντα δὲ καὶ τᾶλλα τὰ φυόμενα χεῖρω καὶ ἀμαυρότερα γίνεσθαι τοῦ χειμῶνος. ταῦτα μὲν οὖν οἶον πρόσγεια περὶ γε τὴν θάλατταν. τὸ δὲ πόντιον φῦκος ὃ οἱ σπογγεῖς ἀνακολουμβῶσι πελάγιον.

[5] Καὶ ἐν Κρήτῃ δὲ φύεται πρὸς τῇ γῇ ἐπὶ τῶν πετρῶν πλεῖστον καὶ κάλλιστον ᾧ βάπτουσιν οὐ μόνον τὰς ταινίας ἀλλὰ καὶ ἔρια καὶ ἱμάτια· καὶ ἕως ἂν ἡ πρόσφατος ἢ βαφὴ, πολὺ καλλίων ἢ χροὰ τῆς πορφύρας· γίνεται δ' ἐν τῇ προσβόρρῳ καὶ πλεῖον καὶ κάλλιον, ὥσπερ αἱ σπογγαὶ καὶ ἄλλα τοιαῦτα.

[6] Ἄλλο δ' ἐστὶν ὅμοιον τῇ ἀγρώστει· καὶ γὰρ τὸ φύλλον παραπλήσιον ἔχει καὶ τὴν ρίζαν γονατώδη καὶ μακρὰν καὶ πεφυκυῖαν πλαγίαν, ὥσπερ ἢ τῆς ἀγρώστιδος· ἔχει δὲ καὶ καυλὸν καλαμώδη, καθάπερ ἢ ἄγρωστις· μεγέθει δὲ ἕλαττον πολὺ τοῦ φύκους.

Ἄλλο δὲ τὸ βρύον, ὃ φύλλον μὲν ἔχει ποῶδες τῇ χροᾷ, πλατὺ δὲ καὶ οὐκ ἀνόμοιον ταῖς θριδακίναις, πλὴν ῥυτιδωδέστερον καὶ ὥσπερ συνεσπασμένον. καυλὸν δὲ οὐκ ἔχει, ἀλλ' ἀπὸ μιᾶς ἀρχῆς πλείω τὰ τοιαῦτα καὶ πάλιν ἀπ' ἄλλης· φύεται δὲ ἐπὶ τῶν λίθων τὰ τοιαῦτα πρὸς τῇ γῇ καὶ τῶν ὀστράκων. καὶ τὰ μὲν ἐλάττω σχεδὸν ταῦτ' ἐστίν.

[7] Ἡ δὲ δρυς καὶ ἡ ἐλάτη παράγειοι μὲν ἄμφω· φύονται δ' ἐπὶ λίθοις καὶ ὀστράκοις· ρίζας μὲν οὐκ ἔχουσαι, προσπεφυκυῖαι δὲ ὥσπερ αἱ λεπάδες. ἀμφοτέραι μὲν οἶον σαρκόφυλλα· προμηκέστερον δὲ τὸ φύλλον πολὺ καὶ παχύτερον τῆς ἐλάτης πέφυκε καὶ οὐκ ἀνόμοιον τοῖς τῶν ὀσπρίων λοβοῖς, κοῖλον δ' ἔνδοθεν καὶ οὐδὲν ἔχον ἐν αὐτοῖς· τὸ δὲ τῆς δρυὸς λεπτὸν καὶ μυρικωδέστερον· χρῶμα δ' ἐπιόρφυρον ἀμφοῖν. ἡ δὲ ὅλη μορφή τῆς μὲν ἐλάτης ὀρθὴ καὶ αὐτῆς καὶ τῶν ἀκρεμόνων, τῆς δὲ δρυὸς σκολιωτέρα καὶ μᾶλλον ἔχουσα πλάτος· [8] γίνεται δὲ ἄμφω καὶ πολύκαυλα καὶ <μονόκαυλα,> μονοκαυλότερον δὲ ἡ ἐλάτη· τὰς δὲ ἀκρεμονικὰς ἀποφύσεις ἡ μὲν ἐλάτη μακρὰς ἔχει καὶ εὐθείας καὶ μανὰς, ἡ δὲ δρυς βραχυτέρας καὶ σκολιωτέρας καὶ πυκνοτέρας. τὸ δ' ὅλον μέγεθος ἀμφοτέρων ὡς πυγωναῖον ἢ μικρὸν ὑπεραῖρον, μείζον δὲ ὡς ἀπλῶς εἰπεῖν τὸ τῆς ἐλάτης. χρήσιμον δὲ ἡ δρυς εἰς βαφὴν ἐρίων ταῖς γυναιξίν. ἐπὶ μὲν τῶν ἀκρεμόνων προσηρτημένα τῶν ὀστρακοδέρμων ζώων ἔνια· καὶ κάτω δὲ πρὸς αὐτῷ τῷ καυλῷ περιπεφυκότην τινῶν γ' ὄλω, ἐν τούτοις δεδυκότες ὀνίννοι τε καὶ ἄλλ' ἅττα καὶ τὸ ὅμοιον πολὺποδι.

[9] Ταῦτα μὲν οὖν πρόσγεια καὶ ῥάδια θεωρηθῆναι· φασὶ δέ τινες καὶ ἄλλην δρῦν εἶναι ποντίαν ἢ καὶ καρπὸν φέρει, καὶ ἡ βάλανος αὐτῆς χρησίμη· τοὺς δὲ σκινθοὺς καὶ κολυμβητὰς λέγειν ὅτι καὶ ἕτεραι μεγάλαι τινὲς τοῖς μεγέθεσιν εἴησαν.

Ἡ δὲ ἄμπελος ἀμφοτέρωσθε γίνεται· καὶ γὰρ πρὸς τῇ γῇ καὶ ποντία· μείζω δ' ἔχει καὶ τὰ φύλλα καὶ τὰ κλήματα καὶ τὸν καρπὸν ἢ ποντία.

Ἡ δὲ συκὴ ἀφυλλος μὲν τῷ δὲ μεγέθει οὐ μεγάλη, χρῶμα δὲ τοῦ φλοιοῦ φοινικοῦν.

[10] Ὁ δὲ φοῖνιξ ἐστὶ μὲν πόντιον βραχυστέλεχος δὲ σφόδρα, καὶ σχεδὸν εὐθείαι αἱ ἐκφύσεις τῶν ῥάβδων· καὶ κάτωθεν οὐ κύκλω αὗται, καθάπερ τῶν ῥάβδων αἱ ἀκρεμόνες, ἀλλ' ὥσ᾽ ἐν πλάτει κατὰ μίαν συνεχεῖς, ὀλιγαχοῦ δὲ καὶ ἀπαλλάττουσαι. τῶν δὲ ῥάβδων ἢ τῶν ἀποφύσεων τούτων ὁμοία τρόπον τινὰ ἡ φύσις τοῖς τῶν ἀκανθῶν φύλλοις τῶν ἀκανικῶν, οἶον σόγκοις καὶ τοῖς τοιούτοις, πλὴν ὀρθαὶ καὶ οὐχ, ὥσπερ ἐκεῖνα, περικεκλάσμεναι καὶ τὸ φύλλον ἔχουσαι διαβεβρωμένον ὑπὸ τῆς ἄλμης· ἐπεὶ τό γε δι' ὅλου ἦκειν τὸν μέσον γε καυλὸν καὶ ἡ ἄλλη ὄψις παραπλησία. τὸ δὲ χρῶμα καὶ τούτων καὶ τῶν καυλῶν καὶ ὅλου τοῦ φυτοῦ ἐξέρυθρόν τε σφόδρα καὶ φοινικοῦν.

Καὶ τὰ μὲν ἐν τῇδε τῇ θαλάττῃ τοσαῦτα ἐστίν. ἡ γὰρ σπογγία καὶ αἱ ἀπλυσίαι καλούμεναι καὶ εἴ τι τοιοῦτον ἐτέραν ἔχει φύσιν.

[7.1] Ἐν δὲ τῇ ἔξῳ τῇ περὶ Ἡρακλέους στήλας τό τε πράσον, ὥσπερ εἴρηται, φύεται καὶ τὰ ἀπολιθούμενα ταῦτα, οἷον θῦμα καὶ τὰ δαφνοειδῆ καὶ τὰ ἄλλα. τῆς δὲ ἐρυθρᾶς καλουμένης ἐν τῇ Ἀραβίᾳ μικρὸν ἐπάνω Κόπτου ἐν μὲν τῇ γῇ δένδρον οὐδὲν φύεται πλὴν τῆς ἀκάνθης τῆς διψάδος καλουμένης· σπανία δὲ καὶ αὕτη διὰ τὰ καύματα καὶ τὴν ἀνυδρίαν· οὐχ ὕει γὰρ ἀλλ' ἡ δι' ἐτῶν τεττάρων ἢ πέντε καὶ τότε λάβρως καὶ ἐπ' ὀλίγον χρόνον.

[2] Ἐν δὲ τῇ θαλάττῃ φύεται, καλοῦσι δ' αὐτὰ δάφνην καὶ ἐλάαν. ἔστι δὲ ἡ μὲν δάφνη ὁμοία τῇ ἀρία ἢ δὲ ἐλάα <τῇ ἐλάα> τῷ φύλλῳ· καρπὸν δὲ ἔχει ἡ ἐλάα παραπλήσιον ταῖς ἐλάαις· ἀφίησι δὲ καὶ δάκρυον, ἐξ οὗ οἱ ἱατροὶ φάρμακον ἔναιμιον συντιθέασιν ὃ γίνεται σφόδρα ἀγαθόν. ὅταν δὲ ὕδατα πλείω γένηται, μύκητες φύονται πρὸς τῇ θαλάττῃ κατὰ τινα τόπον, οὗτοι δὲ ἀπολιθοῦνται ὑπὸ τοῦ ἡλίου. ἡ δὲ θάλαττα θηριώδης· πλείστους δὲ ἔχει τοὺς καρχαρίας, ὥστε μὴ εἶναι κολυμβῆσαι.

Ἐν δὲ τῷ κόλπῳ τῷ καλουμένῳ Ἡρώων, ἐφ' ὃν καταβαίνουσιν οἱ ἐξ Αἰγύπτου, φύεται μὲν δάφνη τε καὶ ἐλάα καὶ θύμον, οὐ μὴν χλωρά γε ἀλλὰ λιθοειδῆ τὰ ὑπερέχοντα τῆς θαλάττης, ὅμοια δὲ καὶ τοῖς φύλλοις καὶ τοῖς βλαστοῖς τοῖς χλωροῖς. ἐν δὲ τῷ θύμῳ καὶ τὸ τοῦ ἄνθους χρῶμα διάδηλον ὥσάν μίπῳ τελέως ἐξηνηθηκός. μήκη δὲ τῶν δενδρυφίων ὅσον εἰς τρεῖς πήχεις.

[3] Οἱ δέ, ὅτε ἀνάπλους ἦν τῶν ἐξ Ἰνδῶν ἀποσταλέντων ὑπὸ Ἀλεξάνδρου, τὰ ἐν τῇ θαλάττῃ φυόμενα, μέχρι οὗ μὲν ἂν ἦ ἐν τῷ ὑγρῷ, χρῶμά φασιν ἔχειν ὅμοιον τοῖς φυκίοις, ὁπότεν δ' ἐξενεχθέντα τεθῇ πρὸς τὸν ἥλιον, ἐν ὀλίγῳ χρόνῳ ἐξομοιοῦσθαι τῷ ἀλί. φύεσθαι δὲ καὶ σχοίνους λιθίνους παρ' αὐτὴν τὴν θάλατταν, οὓς οὐδεὶς ἂν διαγνοίῃ τῇ ὄψει πρὸς τοὺς ἀληθινούς. θαυμασιώτερον δέ τι τούτου λέγουσι· φύεσθαι γὰρ δενδρύφι' ἅττα τὸ μὲν χρῶμα ἔχοντα ὅμοιον κέρατι βοὸς τοῖς δὲ ὄζοις τραχέα καὶ ἀπ' ἄκρου πυρρά· ταῦτα δὲ θραύεσθαι μὲν εἰ συγκλώῃ τις· ἐκ δὲ τούτων πυρὶ ἐμβαλλόμενα, καθάπερ τὸν σίδηρον, διάπυρα γινόμενα πάλιν ὅταν ἀποψύχῃτο καθίστασθαι καὶ τὴν αὐτὴν χροάν λαμβάνειν.

[4] Ἐν δὲ ταῖς νήσοις ταῖς ὑπὸ τῆς πλημμυρίδος καταλαμβανομέναις δένδρα μεγάλα πεφυκέναι ἡλίκαι πλάτανοι καὶ αἰγειροὶ αἱ μέγιστα· συμβαίνειν δέ, ὅθ' ἡ πλημμυρίς ἐπέλθοι, τὰ μὲν ἄλλα κατακρύπτεσθαι ὅλα, τῶν δὲ μεγίστων ὑπερέχειν τοὺς κλάδους, ἐξ ὧν τὰ πρυμνησία ἀνάπτειν, εἴθ' ὅτε πάλιν ἄμπωτις γίνοιτο ἐκ τῶν ῥιζῶν. ἔχειν δὲ τὸ δένδρον φύλλον μὲν ὅμοιον τῇ δάφνῃ, ἄνθος δὲ τοῖς ἴοις καὶ τῷ χρώματι καὶ τῇ ὁσμῇ, καρπὸν δὲ ἡλίκον ἐλάα

καὶ τοῦτον εὐώδη σφόδρα· καὶ τὰ μὲν φύλλα οὐκ ἀποβάλλειν, τὸ δὲ ἄνθος καὶ τὸν καρπὸν ἅμα τῷ φθινοπώρῳ γίνεσθαι, τοῦ δὲ ἔαρος ἀπορρεῖν.

[5] Ἄλλα δ' ἐν αὐτῇ τῇ θαλάττῃ πεφυκέναι, αἰφύλλα μὲν τὸν δὲ καρπὸν ὅμοιον ἔχειν τοῖς θέρμοις.

Περὶ δὲ τὴν Περσίδα τὴν κατὰ τὴν Καρμανίαν, καθ' ὃ ἡ πλημμυρὶς γίνεται, δένδρα ἐστὶν εὐμεγέθη ὅμοια τῇ ἀνδράχλῃ καὶ τῇ μορφῇ καὶ τοῖς φύλλοις· καρπὸν δὲ ἔχει πολὺν ὅμοιον τῷ χρώματι ταῖς ἀμυγδάλαις ἔξωθεν, τὸ δ' ἐντὸς συνελίττεται καθάπερ συνηρημένον πᾶσιν. ὑποβέβρωται δὲ ταῦτα τὰ δένδρα πάντα κατὰ μέσον ὑπὸ τῆς θαλάττης καὶ ἔστηκεν ὑπὸ τῶν ῥιζῶν, ὥσπερ πολύπους. ὅταν γὰρ ἡ ἄμπωτις γένηται θεωρεῖν [6] ἐστὶν. ὕδωρ δὲ ὅλως οὐκ ἔστιν ἐν τῷ τόπῳ· καταλείπονται δέ τινες διώρυχες δι' ὧν διαπλέουσιν· αὗται δ' εἰσὶ θαλάττης· ὧ καὶ δηλὸν οἶονταί τινες ὅτι τρέφονται ταύτῃ καὶ οὐ τῷ ὕδατι, πλὴν εἴ τι ταῖς ῥίζαις ἐκ τῆς γῆς ἔλκουσιν. εὐλογον δὲ καὶ τοῦθ' ἀλμυρὸν εἶναι· καὶ γὰρ οὐδὲ κατὰ βάθους αἱ ῥίζαι. τὸ δὲ ὅλον ἐν τῷ γένος εἶναι τῶν τ' ἐν τῇ θαλάττῃ φυομένων καὶ τῶν ἐν τῇ γῇ ὑπὸ τῆς πλημμυρίδος καταλαμβανομένων· καὶ τὰ μὲν ἐν τῇ θαλάττῃ μικρὰ καὶ φυκώδη φαινόμενα, τὰ δ' ἐν τῇ γῇ μεγάλα καὶ χλωρὰ καὶ ἄνθος εὐοδμον ἔχοντα, καρπὸν δὲ οἶον θέρμος.

[7] Ἐν Τύλῳ δὲ τῇ νήσῳ, κεῖται δ' αὕτη ἐν τῷ Ἀραβίῳ κόλῳ, τὰ μὲν πρὸς ἔω τοσοῦτο πληθὸς εἶναι φασι δένδρων ὅτ' ἐκβαίνει ἡ πλημμυρὶς ὥστ' ἀπωχυρῶσθαι. πάντα δὲ ταῦτα μεγέθη μὲν ἔχειν ἡλίκᾳ συκῇ, τὸ δὲ ἄνθος ὑπερβάλλον τῇ εὐωδίᾳ, καρπὸν δὲ ἄβρωτον ὅμοιον τῇ ὄψει τῷ θέρμῳ. φέρειν δὲ τὴν νῆσον καὶ τὰ δένδρα τὰ ἐριοφόρα πολλά. ταῦτα δὲ φύλλον μὲν ἔχειν παρόμοιον τῇ ἀμπέλῳ πλὴν μικρόν, καρπὸν δὲ οὐδένα φέρειν· ἐν ᾧ δὲ τὸ ἔριον ἡλίκον μῆλον ἐαρινὸν συμμεμυκός· ὅταν δὲ ὠραῖον ᾖ, ἐκπετάννυσθαι καὶ ἐξείρειν τὸ ἔριον, ἐξ οὗ τὰς σινδόνας ὑφαίνουσι, τὰς μὲν εὐτελεῖς τὰς δὲ πολυτελεστάτας.

[8] Γίνεται δὲ τοῦτο καὶ ἐν Ἰνδοῖς, ὥσπερ ἐλέχθη, καὶ ἐν Ἀραβίᾳ. εἶναι δὲ ἄλλα δένδρα τὸ ἄνθος ἔχοντα ὅμοιον τῷ λευκοίῳ, πλὴν ἄοδμον καὶ τῷ μεγέθει τετραπλάσιον τῶν ἴων. καὶ ἕτερον δὲ τι δένδρον πολύφυλλον ὥσπερ τὸ ῥόδον· τοῦτο δὲ τὴν μὲν νύκτα συμμύειν ἅμα δὲ τῷ ἡλίῳ ἀνιόντι διοίγνυσθαι, μεσημβρίας δὲ τελέως διεπτύχθαι, πάλιν δὲ τῆς δεύλης συνάγεσθαι κατὰ μικρὸν καὶ τὴν νύκτα συμμύειν· λέγειν δὲ καὶ τοὺς ἐγχωρίους ὅτι καθεύδει. γίνεσθαι δὲ καὶ φοίνικας ἐν τῇ νήσῳ καὶ ἀμπέλους καὶ τᾶλλα ἀκρόδρυα καὶ συκᾶς οὐ φυλλορροούσας. ὕδωρ δὲ οὐράνιον

γίνεσθαι μέν, οὐ μὴν χρῆσθαι γε πρὸς τοὺς καρπούς· ἀλλ' εἶναι κρήνας ἐν τῇ νήσῳ πολλὰς, ἀφ' ὧν πάντα βρέχειν, ὃ καὶ συμφέρειν μᾶλλον τῷ σίτῳ καὶ τοῖς δένδροις. δι' ὃ καὶ ὅταν ὕψι τοῦτο ἐπαφίεναι καθαπερὶ καταπλύνοντας ἐκεῖνο. καὶ τὰ μὲν ἐν τῇ ἔξω θαλάττῃ δένδρα τὰ γε νῦν θεωρημένα σχεδὸν τοσαῦτά ἐστιν.

[8.1] Ὑπὲρ δὲ τῶν ἐν τοῖς ποταμοῖς καὶ τοῖς ἔλεσι καὶ ταῖς λίμναις μετὰ ταῦτα λεκτέον. τρία δὲ ἐστὶν εἶδη τῶν ἐν τούτοις, τὰ μὲν δένδρα τὰ δ' ὥσπερ ποιῶδη τὰ δὲ λοχμῶδη. λέγω δὲ ποιῶδη μὲν οἷον τὸ σέλινον τὸ ἔλειον καὶ ὅσα ἄλλα τοιαῦτα· λοχμῶδη δὲ κάλαμον κύπειρον φλεὼ σχοῖνον βούτομον, ἅπερ σχεδὸν κοινὰ πάντων τῶν ποταμῶν καὶ τῶν τοιούτων τόπων.

Ἐνιαχοῦ δὲ καὶ βάτοι καὶ παλίουροι καὶ τὰ ἄλλα δένδρα, καθάπερ ἰτέα λεύκη πλάτανος. τὰ μὲν οὖν μέχρι τοῦ κατακρύπτεσθαι, τὰ δὲ ὥστε μικρὸν ὑπερέχειν, τῶν δὲ αἱ μὲν ρίζαι καὶ μικρὸν τοῦ στελέχους ἐν τῷ ὑγρῷ, τὸ δὲ ἄλλο σῶμα πᾶν ἔξω. τοῦτο γὰρ καὶ ἰτέα καὶ κλήθρα καὶ πλατάνω καὶ φιλύρα καὶ πᾶσι τοῖς φιλύδροις συμβαίνει.

[2] Σχεδὸν δὲ καὶ ταῦτα κοινὰ πάντων τῶν ποταμῶν ἐστὶν· ἐπεὶ καὶ ἐν τῷ Νεῖλῳ πέφυκεν· οὐ μὴν πολλή γε ἡ πλάτανος, ἀλλὰ σπανιωτέρα ἐστὶ ταύτης ἡ λεύκη, πλείστη δὲ μελία καὶ βουμέλιος. τῶν γοῦν ἐν Αἰγύπτῳ φυομένων τὸ μὲν ὅλον πολὺ πλῆθος ἐστὶν πρὸς τὸ ἀριθμῆσασθαι καθ' ἕκαστον· οὐ μὴν ἀλλ' ὥς γε ἀπλῶς εἰπεῖν ἅπαντα ἐδώδιμα καὶ χυλοὺς ἔχοντα γλυκεῖς. διαφέρειν δὲ δοκεῖ τῇ γλυκύτητι καὶ τῷ τρόφιμα μάλιστα εἶναι τρία ταῦτα, ὃ τε πάπυρος καὶ τὸ καλούμενον σάρι καὶ τρίτον ὃ μνάσιον καλοῦσι.

[3] Φύεται δὲ ὁ πάπυρος οὐκ ἐν βάθει τοῦ ὕδατος ἀλλ' ὅσον ἐν δύο πήχεσιν, ἐνιαχοῦ δὲ καὶ ἐν ἐλάττονι. πάχος μὲν οὖν τῆς ρίζης ἡλίκον καρπὸς χειρὸς ἀνδρὸς εὐρώστου, μήκος δὲ ὑπὲρ τετράπηχυν· φύεται δὲ ὑπὲρ τῆς γῆς αὐτῆς, πλαγίας ρίζας εἰς τὸν πηλὸν καθιεῖσα λεπτὰς καὶ πυκνάς, ἄνω δὲ τοὺς παπύρους καλουμένους τριγώνους, μέγεθος ὡς δέκα πήχεις, κόμην ἔχοντας ἀχρεῖον ἀσθενῇ καρπὸν δὲ ὅλως οὐδένα· τούτους δ' ἀναδίδωσι [4] κατὰ πολλὰ μέρη. χρῶνται δὲ ταῖς μὲν ρίζαις ἀντὶ ξύλων οὐ μόνον τῷ κάειν ἀλλὰ καὶ τῷ σκεύει ἄλλα ποιεῖν ἐξ αὐτῶν παντοδαπά· πολὺ γὰρ ἔχει τὸ ξύλον καὶ καλόν. αὐτὸς δὲ ὁ πάπυρος πρὸς πλείστα χρήσιμος· καὶ γὰρ πλοῖα ποιοῦσιν ἐξ αὐτοῦ, καὶ ἐκ τῆς βίβλου ἰστία τε πλέκουσι καὶ ψιάθους καὶ ἐσθῆτά τινα καὶ στρωμνάς καὶ σχοινία τε καὶ ἕτερα πλείω. καὶ ἐμφανέστατα δὴ τοῖς ἔξω τὰ βιβλία· μάλιστα δὲ καὶ πλείστη βοήθεια πρὸς τὴν τροφήν ἀπ' αὐτοῦ γίνεται. μασῶνται γὰρ ἅπαντες οἱ ἐν τῇ χώρᾳ τὸν πάπυρον καὶ ὠμὸν καὶ ἐφθὸν καὶ

ὀπτόν· καὶ τὸν μὲν χυλὸν καταπίνουσι, τὸ δὲ μάσημα ἐκβάλλουσιν. ὁ μὲν οὖν πάπυρος τοιοῦτός τε καὶ ταύτας παρέχεται τὰς χρεῖας. γίνεται δὲ καὶ ἐν Συρία περὶ τὴν λίμνην ἐν ἧ καὶ ὁ κάλαμος ὁ εὐώδης· ὅθεν καὶ Ἀντίγονος εἰς τὰς ναῦς ἐποιεῖτο τὰ σχοινία.

[5] Τὸ δὲ σάρι φύεται μὲν ἐν τῷ ὕδατι περὶ τὰ ἔλη καὶ τὰ πεδία, ἐπειδὴν ὁ ποταμὸς ἀπέλθῃ, ρίζαν δὲ ἔχει σκληρὰν καὶ συνεστραμμένην, καὶ ἐξ αὐτῆς φύεται τὰ σαρία καλούμενα· ταῦτα δὲ μήκος μὲν ὡς δύο πήχεις, πάχος δὲ ἡλίκον ὁ δάκτυλος ὁ μέγας τῆς χειρός· τρίγωνον δὲ καὶ τοῦτο, καθάπερ ὁ πάπυρος, καὶ κόμην ἔχον παραπλήσιον. μασώμενοι δὲ ἐκβάλλουσι καὶ τοῦτο τὸ μάσημα, τῇ ρίζῃ δὲ οἱ σιδηρουργοὶ χρῶνται· τὸν γὰρ ἄνθρακα ποιεῖ χρηστὸν διὰ τὸ σκληρὸν εἶναι τὸ ξύλον.

[6] Τὸ δὲ μνάσιον ποιῶδες ἐστίν, ὥστ' οὐδεμίαν παρέχεται χρεῖαν πλὴν τὴν εἰς τροφήν.

Καὶ τὰ μὲν γλυκύτητι διαφέροντα ταῦτά ἐστι. φύεται δὲ καὶ ἕτερον ἐν τοῖς ἔλεσι καὶ ταῖς λίμναις ὃ οὐ συνάπτει τῇ γῇ, τὴν μὲν φύσιν ὅμοιον τοῖς κρίνοις, πολυφυλλότερον δὲ καὶ παρ' ἄλληλα τὰ φύλλα καθάπερ ἐν διστοιχίᾳ· χρῶμα δὲ χλωρὸν ἔχει σφόδρα. χρῶνται δὲ οἱ ἱατροὶ πρὸς τε τὰ γυναικεῖα αὐτῶ καὶ πρὸς τὰ κατάγματα.

[7] [Ταῦτα δὲ γίνεται ἐν τῷ ποταμῷ εἰ μὴ ὁ ροῦς ἐξέφερῃ· συμβαίνει δὲ ὥστε καὶ ἀποφέρεσθαι· ἕτερα δ' ἀπ' αὐτῶν πλεῖω.]

Ὁ δὲ κύαμος φύεται μὲν ἐν τοῖς ἔλεσι καὶ λίμναις, καυλὸς δὲ αὐτοῦ μήκος μὲν ὁ μακρότατος εἰς τέτταρας πήχεις, πάχος δὲ δακτυλιαῖος, ὅμοιος δὲ καλάμῳ μαλακῷ ἄγονάτῳ. διαφύσεις δὲ ἔνδοθεν ἔχει δι' ὅλου διειλημμένας ὁμοίας τοῖς κηρίοις· ἐπὶ τούτῳ δὲ ἡ κωδύα, παρομοία σφηκίῳ περιφερεῖ, καὶ ἐν ἐκάστῳ τῶν κυττάρων κύαμος μικρὸν ὑπεραίρων αὐτῆς, πλῆθος δὲ οἱ πλεῖστοι τριάκοντα. τὸ δὲ ἄνθος διπλάσιον ἢ μήκωνος, χρῶμα δὲ ὅμοιον ρόδῳ κατακορές· ἐπάνω δὲ τοῦ ὕδατος ἡ κωδύα. παραφύεται δὲ φύλλα μεγάλα παρ' ἕκαστον τῶν κυάμων, ὧν ἴσα τὰ μεγέθη πετάσῃ Θετταλικῇ τὸν αὐτὸν ἔχοντα καυλὸν τῷ τῶν κυάμων. συντρίψαντι δ' ἕκαστον τῶν κυάμων φανερόν ἐστι τὸ πικρὸν συνεστραμμένον, ἐξ [8] οὗ γίνεται ὁ πῖλος. τὰ μὲν οὖν περὶ τὸν καρπὸν τοιαῦτα. ἡ δὲ ρίζα παχυτέρα τοῦ καλάμου τοῦ παχυτάτου καὶ διαφύσεις ὁμοίως ἔχουσα τῷ καυλῷ. ἐσθίουσι δ' αὐτὴν καὶ ὠμὴν καὶ ἐφθὴν καὶ ὀπτὴν, καὶ οἱ περὶ τὰ ἔλη τούτῳ σίτῳ χρῶνται. φύεται μὲν οὖν ὁ πολὺς αὐτόματος· οὐ μὴν ἀλλὰ καὶ καταβάλλουσιν ἐν πηλῷ ἀχυρώσαντες εὗ μάλα πρὸς τὸ κατενεχθῆναί τε καὶ μεῖναι καὶ μὴ διαφθαρῆναι· καὶ οὕτω κατασκευάζουσι

τοὺς κυαμῶνας· ἂν δ' ἅπας ἀντιλάβηται, μένει διὰ τέλους. ἰσχυρὰ γὰρ ἡ ῥίζα καὶ οὐ πόρρω τῆς τῶν καλάμων πλὴν ἐπακανθίζουσα· δι' ὃ καὶ ὁ κροκόδειλος φεύγει μὴ προσκόψη τῷ ὀφθαλμῷ τῷ μὴ ὀξὺ καθορᾶν· γίνεται δὲ οὗτος καὶ ἐν Συρίᾳ καὶ κατὰ Κιλικίαν, ἀλλ' οὐκ ἐκπέττουσιν αἱ χῶραι· καὶ περὶ Τορώνην τῆς Χαλκιδικῆς ἐν λίμνῃ τινὶ μετρία τῷ μεγέθει· καὶ αὐτοῦ πέττεται τελέως καὶ τελεοκαρπεῖ.

[9] Ὁ δὲ λωτὸς καλούμενος φύεται μὲν ὁ πλεῖστος ἐν τοῖς πεδίοις, ὅταν ἡ χώρα κατακλυσθῇ. τούτου δὲ ἡ μὲν τοῦ καυλοῦ φύσις ὁμοία τῇ τοῦ κυάμου, καὶ οἱ πέτασοι δὲ ὡσαύτως, πλὴν ἐλάττους καὶ λεπτότεροι. ἐπιφύεται δὲ ὁμοίως ὁ καρπὸς τῷ τοῦ κυάμου. τὸ ἄνθος αὐτοῦ λευκὸν ἐμφορὲς τῇ στενότητι τῶν φύλλων τοῖς τοῦ κρίνου, πολλὰ δὲ καὶ πυκνὰ ἐπ' ἀλλήλοις φύεται. ταῦτα δὲ ὅταν μὲν ὁ ἥλιος δύῃ συμμύει καὶ συγκαλύπτει τὴν κωδύαν, ἅμα δὲ τῇ ἀνατολῇ διοίγεται καὶ ὑπὲρ τοῦ ὕδατος γίνεται. τοῦτο δὲ ποιεῖ μέχρι ἂν ἡ κωδύα ἐκτελεσθῇ καὶ τὰ ἄνθη [10] περιρρυῇ. τῆς δὲ κωδύας τὸ μέγεθος ἡλικὸν μήκωνος τῆς μεγίστης, καὶ διέζωσται ταῖς κατατομαῖς τὸν αὐτὸν τρόπον τῇ μήκωνι· πλὴν πυκνότερος ἐν ταύταις ὁ καρπός. ἔστι δὲ παρόμοιος τῷ κέγχρω. ἐν δὲ τῷ Εὐφράτῃ τὴν κωδύαν φασὶ καὶ τὰ ἄνθη δύνειν καὶ ὑποκαταβαίνειν τῆς ὀψίας μέχρι μεσῶν νυκτῶν καὶ τῷ βάθει πόρρω· οὐδὲ γὰρ καθιέντα τὴν χεῖρα λαβεῖν εἶναι. μετὰ δὲ ταῦτα ὅταν ὀρθρος ᾖ πάλιν ἐπανιέναι καὶ πρὸς ἡμέραν ἔτι μᾶλλον, ἅμα τῷ ἡλίῳ φανερόν (ὄν) ὑπὲρ τοῦ ὕδατος καὶ ἀνοίγειν τὸ ἄνθος, ἀνοιχθέντος δὲ ἔτι ἀναβαίνειν· συχνὸν δὲ τὸ ὑπεραῖρον [11] εἶναι τὸ ὕδωρ. τὰς δὲ κωδύας ταύτας οἱ Αἰγύπτιοι συνθέντες εἰς τὸ αὐτὸ σήπουσιν· ἐπὰν δὲ σαπῇ τὸ κέλφος, ἐν τῷ ποταμῷ κλύζοντες ἐξαιροῦσι τὸν καρπὸν, ξηράναντες δὲ καὶ πτίσαντες ἄρτους ποιοῦσι καὶ τούτῳ χρῶνται σιτίῳ. ἡ δὲ ῥίζα τοῦ λωτοῦ καλεῖται μὲν κόρσιον, ἐστὶ δὲ στρογγύλη, τὸ μέγεθος ἡλικὸν μῆλον Κυδωνίων· φλοιὸς δὲ περίκειται περὶ αὐτὴν μέλας ἐμφορὴς τῷ κασταναῖκῷ καρύῳ· τὸ δὲ ἐντὸς λευκόν, ἐψόμενον δὲ καὶ ὀπτώμενον γίνεται λεκιθῶδες, ἡδὺ δὲ ἐν τῇ προσφορᾷ· ἐσθίεται δὲ καὶ ὥμῃ, ἀρίστη δὲ ἐν [τῷ] ὕδατι ἐφθῇ καὶ ὀπτῇ. καὶ τὰ μὲν ἐν τοῖς ὕδασι σχεδὸν ταῦτά ἐστιν.

[12] Ἐν δὲ τοῖς ἀμμώδεσι χωρίοις, ἃ ἐστὶν οὐ πόρρω τοῦ ποταμοῦ, φύεται κατὰ γῆς ὃ καλεῖται μαλιναθάλλη, στρογγύλον τῷ σχήματι μέγεθος δὲ ἡλικὸν μέσπιλον ἀπύρηνον δὲ ἄφλοιον· φύλλα δὲ ἀφίησιν ἀπ' αὐτοῦ ὅμοια κυπεύρω· ταῦτα συνάγοντες οἱ κατὰ τὴν χώραν ἔψουσιν ἐν βρυτῷ τῷ ἀπὸ τῶν κριθῶν καὶ γίνεται γλυκέα σφόδρα· χρῶνται δὲ πάντες ὥσπερ τραγήμασι.

[13] Τοῖς δὲ βουσί καὶ τοῖς προβάτοις ἅπαντα μὲν τὰ φυόμενα ἐδώδιμά ἐστιν, ἐν δέ τι γένος ἐν ταῖς λίμναις καὶ τοῖς ἔλεσι φύεται διαφέρον, ὃ καὶ χλωρὸν νέμονται καὶ ξηραίνοντες παρέχουσι κατὰ χειμῶνα τοῖς βουσὶν ὅταν ἐργάσωνται· καὶ τὰ σώματα ἔχουσιν εὖ σίτου ἄλλο λαμβάνοντες οὐθέν.

[14] Ἔστι δὲ καὶ ἄλλο παραφυόμενον αὐτόματον ἐν τῷ σίτῳ· τοῦτο δέ, ὅταν ὁ σίτος ἦ καθαρὸς, ὑποπτίσαντες καταβάλλουσι τοῦ χειμῶνος ὑγρὰν εἰς γῆν· βλαστήσαντος δὲ τεμόντες καὶ ξηράναντες παρέχουσι καὶ τοῦτο βουσί καὶ ἵπποις καὶ τοῖς ὑποζυγίοις σὺν τῷ καρπῷ τῷ ἐπιγινομένῳ· ὁ δὲ καρπὸς μέγεθος μὲν ἡλίκον σήσαμον, στρογγύλος δὲ καὶ τῷ χρώματι χλωρός, ἀγαθὸς δὲ διαφερόντως. ἐν Αἰγύπτῳ μὲν οὖν τὰ περιττὰ σχεδὸν ταῦτα ἄν τις λάβοι.

[9.1] Ἐκαστοὶ δὲ τῶν ποταμῶν εἰκόσιν ἰδίον τι φέρειν, ὥσπερ καὶ τῶν χερσαίων. ἐπεὶ οὐδὲ ὁ τρίβολος ἐν ἅσιν οὐδὲ πανταχοῦ φύεται, ἀλλ' ἐν τοῖς ἐλώδεσι τῶν ποταμῶν· ἐν μεγίστῳ δὲ βάθει πενταπῆχει ἢ μικρῷ μείζονι, καθάπερ περὶ τὸν Στρυμόνα· σχεδὸν δὲ ἐν τοσοῦτῳ καὶ ὁ κάλαμος καὶ τὰ ἄλλα. ὑπέρχει δὲ οὐθέν αὐτοῦ πλὴν αὐτὰ τὰ φύλλα ὥσπερ ἐπινέοντα καὶ κρύπτοντα τὸν τρίβολον, ὁ δὲ τρίβολος αὐτὸς ἐν τῷ ὕδατι νεύων εἰς βυθόν. τὸ δὲ φύλλον ἐστὶ πλατὺ προσεμφερὲς τῷ τῆς πτελέας, μίσχον δὲ [2] ἔχει σφόδρα μακρόν· ὁ δὲ καυλὸς ἐξ ἄκρου παχύτατος, ὅθεν τὰ φύλλα καὶ ὁ καρπός, τὰ δὲ κάτω λεπτότερος αἰεὶ μέχρι τῆς ρίζης· ἔχει δὲ ἀποπεφυκότα ἀπ' αὐτοῦ τριχῶδη τὰ μὲν πλεῖστα παράλληλα τὰ δὲ καὶ παραλλάττοντα, κάτωθεν ἀπὸ τῆς ρίζης μεγάλα τὰ δὲ ἄνω αἰεὶ ἐλάττω προϊοῦσιν, ὥστε τὰ τελευταῖα μικρὰ ἀάμπαν εἶναι καὶ τὴν διαφορὰν μεγάλην τὴν ἀπὸ τῆς ρίζης πρὸς τὸν καρπόν. ἔχει δὲ ἐκ τοῦ ἐνὸς καυλοῦ καὶ παραβλαστήματα πλείω· καὶ γὰρ τρία καὶ τέτταρα, μέγιστον δ' αἰεὶ τὸ πλησιαιτέρον τῆς ρίζης, εἴτα τὸ μετὰ τοῦτο καὶ τὰ ἄλλα κατὰ λόγον. τὸ δὲ παραβλάστημά ἐστιν ὥσπερ καυλὸς ἄλλος λεπτότερος μὲν τοῦ πρώτου, τὰ δὲ φύλλα καὶ τὸν καρπὸν ἔχων ὁμοίως. ὁ δὲ καρπὸς μέλας καὶ σκληρὸς σφόδρα. ρίζαν δὲ ἡλίκην καὶ ποίαν ἔχει σκεπτέον. ἢ μὲν οὖν φύσις τοιαύτη. φύεται μὲν ἀπὸ τοῦ καρποῦ τοῦ πίπτοντος καὶ ἀφήσι βλαστὸν τοῦ ἥρος· [3] φασὶ δὲ οἱ μὲν εἶναι ἐπέτειον οἱ δὲ διαμένειν τὴν μὲν ρίζαν εἰς χρόνον, ἐξ ἧς καὶ τὴν βλάστησιν εἶναι τοῦ καυλοῦ. τοῦτο μὲν οὖν σκεπτέον. ἴδιον δὲ παρὰ τᾶλλα τὸ τῶν παραφυομένων ἐκ τοῦ καυλοῦ τριχωδῶν· οὔτε γὰρ φύλλα ταῦτα οὔτε καυλός· ἐπεὶ τό γε τῆς παραβλαστήσεως κοινὸν καλάμου καὶ ἄλλων.

[10.1] Τὰ μὲν οὖν ἴδια θεωρητέον ἰδίως δῆλον ὅτι, τὰ δὲ κοινὰ κοινῶς. διαιρεῖν δὲ χρή καὶ ταῦτα κατὰ τοὺς τόπους, οἷον εἰ τὰ μὲν ἔλεια τὰ δὲ λιμναῖα

τὰ δὲ ποτάμια μᾶλλον ἢ καὶ κοινὰ πάντων τῶν τόπων· διαίρειν δὲ καὶ ποῖα ταῦτα ἐν τῷ ὑγρῷ καὶ τῷ ξηρῷ φύεται, καὶ ποῖα ἐν τῷ ὑγρῷ μόνον, ὡς ἀπλῶς εἰπεῖν πρὸς τὰ κοινότατα εἰρημένα πρότερον.

Ἐν δ' οὖν τῇ λίμνῃ τῇ περὶ Ὀρχομενὸν τὰδ' ἐστὶ τὰ φυόμενα δένδρα καὶ ὑλήματα, ἰτέα ἐλαίαγνος σίδη κάλαμος ὃ τε αὐλητικὸς καὶ ὁ ἕτερος κύπειρον φλεὼς τύφη, ἔτι γε μῆνανθος ἴκμη καὶ τὸ καλούμενον ἵπνον. ὁ γὰρ προσαγορεύουσι λέμνα τούτου τὰ πλείω καθ' ὕδατός ἐστι.

[2] Τούτων δὲ τὰ μὲν ἄλλα γνώριμα· ὁ δ' ἐλαίαγνος καὶ ἡ σίδη καὶ ἡ μῆνανθος καὶ ἡ ἴκμη καὶ τὸ ἵπνον ἴσως μὲν φύεται καὶ ἐτέρωθι, προσαγορεύεται δὲ ἄλλοις ὀνόμασι· λεκτέον δὲ περὶ αὐτῶν. ἔστι δὲ ὁ μὲν ἐλαίαγνος φύσει μὲν θαμνώδης καὶ παρόμοιον τοῖς ἄγνοις, φύλλον δὲ ἔχει τῷ μὲν σχήματι παραπλήσιον μαλακὸν δέ, ὥσπερ αἱ μηλέαι καὶ χνοῶδες. ἄνθος δὲ τῷ τῆς λεύκης ὅμοιον ἔλαττον· καρπὸν δὲ οὐδένα φέρει. φύεται δὲ ὁ πλείστος μὲν ἐπὶ τῶν πλοάδων νήσων· εἰσὶ γάρ τινες καὶ ἐνταῦθα πλοάδες, ὥσπερ ἐν Αἰγύπτῳ περὶ τὰ ἔλη καὶ ἐν Θεσπρωτίδι καὶ ἐν ἄλλαις λίμναις· ἐλάττων δὲ καθ' ὕδατος· ὁ μὲν οὖν ἐλαίαγνος τοιοῦτον.

[3] Ἡ δὲ σίδη τὴν μὲν μορφήν ἐστιν ὁμοία τῇ μήκωνι· καὶ γὰρ τὸ ἄνω κυτινώδες τοιοῦτον ἔχει, πλὴν μείζον ὡς κατὰ λόγον· μεγέθει δὲ ὅλος ὁ ὄγκος ἡλίκον μῆλον· ἔστι δὲ οὐ γυμνόν, ἀλλὰ ὑμένες περὶ αὐτὴν λευκοί, καὶ ἐπὶ τούτοις ἐξῶθεν φύλλα ποώδη παραπλήσια τοῖς τῶν ρόδων ὅταν ἐν κάλυξιν ᾧσι, τέτταρα τὸν ἀριθμὸν· ἀνοιχθεῖσα δὲ τοὺς κόκκους ἐρυθροὺς μὲν ἔχει τῷ σχήματι δὲ οὐχ ὁμοίους ταῖς ρόαις ἀλλὰ περιφερεῖς μικροὺς δὲ καὶ οὐ πολλῷ μείζους κέγχρου· τὸν δὲ χυλὸν ὕδατώδη τινά, καθάπερ ὁ τῶν πυρῶν. ἀδρύνεται δὲ τοῦ θέρους, μίσχον δὲ ἔχει μακρόν. τὸ δὲ ἄνθος ὅμοιον ρόδου κάλυκι, μείζον δὲ καὶ σχεδὸν διπλάσιον τῷ μεγέθει. τοῦτο μὲν οὖν καὶ τὸ φύλλον ἐπὶ τοῦ ὕδατος· μετὰ δὲ ταῦτα, ὅταν ἀπανθήσῃ καὶ συστή τὸ περικάρπιον, κατακλίνεσθαι φασιν εἰς τὸ ὕδωρ μᾶλλον, τέλος δὲ συνάπτειν τῇ γῇ καὶ τὸν καρπὸν ἐκχεῖν.

[4] Καρποφορεῖν δὲ τῶν ἐν τῇ λίμνῃ τοῦτο καὶ τὸ βούτομον καὶ τὸν φλεών. εἶναι δὲ τοῦ βουτόμου μέλανα, τῷ δὲ μεγέθει παραπλήσιον τῷ τῆς σίδης. τοῦ δὲ φλεῶ τὴν καλουμένην ἀνθήλην, ᾧ χρῶνται πρὸς τὰς κονίας. τοῦτο δ' ἐστὶν οἷον πλακουντῶδες τι μαλακὸν ἐπίπυρρον. ἔτι δὲ καὶ τοῦ φλεῶ καὶ τοῦ βουτόμου τὸ μὲν θῆλυ ἄκαρπον, χρήσιμον δὲ πρὸς τὰ πλόκανα, τὸ δὲ ἄρρεν ἀχρεῖον.

Περὶ δὲ τῆς ἴκμης καὶ μηνάνθους καὶ τοῦ ἵπνου σκεπτέον.

[5] Ἰδιώτατον δὲ τούτων ἐστὶν ἡ τύφη καὶ τῷ ἄφυλλον εἶναι καὶ τῷ μὴ πολὺρριζον τοῖς ἄλλοις ὁμοίως· ἐπεὶ τᾶλλα οὐχ ἦττον εἰς τὰ κάτω τὴν ὀρμὴν ἔχει καὶ τὴν δύναμιν· μάλιστα δὲ τὸ κύπειρον, ὥσπερ καὶ ἡ ἄγρωστις, δι' ὃ καὶ δυσώλεθρα καὶ ταῦτα καὶ ὅλως ἅπαν τὸ γένος τὸ τοιοῦτον. ἡ δὲ ῥίζα τοῦ κυπείου πολὺ τι τῶν ἄλλων παραλλάττει τῇ ἀνωμαλίᾳ, τῷ τὸ μὲν εἶναι παχύ τι καὶ σαρκῶδες αὐτῆς τὸ δὲ λεπτὸν καὶ ξυλῶδες· καὶ τῇ βλαστήσει καὶ τῇ γενέσει· φύεται γὰρ ἀπὸ τοῦ πρεμνώδους ἐτέρα λεπτή κατὰ πλάγιον, εἴτ' ἐν ταύτῃ συνίσταται πάλιν τὸ σαρκῶδες, ἐν ᾧ καὶ ὁ βλαστὸς ἀφ' οὗ ὁ καυλός· ἀφήσει δὲ καὶ εἰς βάθος τὸν αὐτὸν τρόπον ῥίζας, δι' ὃ καὶ πάντων μάλιστα δυσώλεθρον καὶ ἔργον ἐξελεῖν.

[6] (Σχεδὸν δὲ παραπλησίως φύεται ἡ ἄγρωστις ἐκ τῶν γονάτων· αἱ γὰρ ῥίζαι γονατώδεις, ἐξ ἐκάστου δ' ἀφήσιν ἄνω βλαστὸν καὶ κάτωθεν ῥίζαν. ὡσαύτως δὲ καὶ ἡ ἄκανθα ἡ ἀκανώδης, ἀλλ' οὐ καλαμώδης οὐδὲ γονατώδης ἡ ῥίζα ταύτης. ταῦτα μὲν οὖν ἐπὶ πλεῖον διὰ τὴν ὁμοιότητα εἴρηται.)

Φύεται δ' ἐν ἀμφοῖν καὶ ἐν τῇ γῇ καὶ ἐν τῷ ὕδατι ἰτέα κάλαμος, πλὴν τοῦ αὐλητικοῦ, κύπειρον τύφη φλεῶς βούτομος· ἐν δὲ τῷ ὕδατι μόνον σίδη. περὶ γὰρ τῆς τύφης ἀμφισβητοῦσι. καλλίω δὲ καὶ μείζω τῶν ἐν ἀμφοῖν φυομένων αἰεὶ τὰ ἐν τῷ ὕδατι γίνεσθαι φασι. φύεσθαι δ' ἔνια τούτων καὶ ἐπὶ τῶν πλοάδων, οἷον τὸ κύπειρον καὶ τὸ βούτομον καὶ τὸν φλεῶν, ὥστε πάντα τὰ μέρη ταῦτα κατέχειν.

[7] Ἐδώδιμα δ' ἐστὶ τῶν ἐν τῇ λίμνῃ τάδε· ἡ μὲν σίδη καὶ αὐτὴ καὶ τὰ φύλλα τοῖς προβάτοις, ὁ δὲ βλαστὸς τοῖς ὑσίν, ὁ δὲ καρπὸς τοῖς ἀνθρώποις. τοῦ δὲ φλεῶ καὶ τῆς τύφης καὶ τοῦ βουτόμου τὸ πρὸς ταῖς ῥίζαις ἀπαλόν, ὃ μάλιστα ἐσθίει τὰ παιδιά. ῥίζα δ' ἐδώδιμος ἡ τοῦ φλεῶ μόνη τοῖς βοσκήμασιν. ὅταν δ' αὐχμὸς ᾗ καὶ μὴ γένηται τὸ κατὰ κεφαλὴν ὕδωρ, ἅπαντα αὐχμεῖ τὰ ἐν τῇ λίμνῃ, μάλιστα δὲ ὁ κάλαμος, ὑπὲρ οὗ καὶ λοιπὸν εἶπεῖν· ὑπὲρ γὰρ τῶν ἄλλων σχεδὸν εἴρηται.

[11.1] Τοῦ δὴ καλάμου δύο φασὶν εἶναι γένη, τὸν τε αὐλητικὸν καὶ τὸν ἕτερον· ἐν γὰρ εἶναι τὸ γένος τοῦ ἐτέρου, διαφέρειν δὲ ἀλλήλων ἰσχυῖ «καὶ παχύτητι» καὶ λεπτότητι καὶ ἀσθeneiᾳ· καλοῦσι δὲ τὸν μὲν ἰσχυρὸν καὶ παχὺν χαρακίαν τὸν δ' ἕτερον πλόκιμον· καὶ φύεσθαι τὸν μὲν πλόκιμον ἐπὶ τῶν πλοάδων τὸν δὲ χαρακίαν ἐπὶ τοῖς κώμυσι· κώμυθας δὲ καλοῦσι οὗ ἂν ἡ συνηθροισμένος κάλαμος καὶ συμπεπλεγμένος ταῖς ῥίζαις· τοῦτο δὲ γίνεται καθ' οὓς ἂν τόπους τῆς λίμνης εὐγειον ᾗ χωρίον· γίνεσθαι δὲ ποτε τὸν χαρακίαν καὶ οὗ ὁ αὐλητικός, μακρότερον μὲν τοῦ ἄλλου χαρακίου

σκοληγκόβρωτον δέ. τούτου μὲν οὖν ταύτας λέγουσι τὰς διαφοράς.

[2] Περὶ δὲ τοῦ αὐλητικοῦ τὸ μὲν φύεσθαι δι' ἐννεατηρίδος, ὥσπερ τινὲς φασι, καὶ ταύτην εἶναι τὴν τάξιν οὐκ ἀληθές, ἀλλὰ τὸ μὲν ὅλον αὐξηθείσης γίνεται τῆς λίμνης· ὅτι δὲ τοῦτ' ἐδόκει συμβαίνειν ἐν τοῖς πρότερον χρόνοις μάλιστα δι' ἐννεατηρίδος, καὶ τὴν γένεσιν τοῦ καλάμου ταύτην ἐποιοῦν τὸ συμβεβηκὸς ὡς τάξιν λαμβάνοντες.

[3] γίνεται δὲ ὅταν ἐπομβρίας γενομένης ἐμμένη τὸ ὕδωρ δύο ἔτη τοῦλάχιστον, ἂν δὲ πλείω καὶ καλλίων· τούτου δὲ μάλιστα μνημονεύουσι γεγονότος τῶν ὕστερον χρόνων ὅτε συνέβη τὰ περὶ Χαιρώνειαν· πρὸ τούτων γὰρ ἔφασαν ἔτη πλείω βαθυνηθῆναι τὴν λίμνην· μετὰ δὲ ταῦτα ὕστερον, ὡς ὁ λοιμὸς ἐγένετο σφοδρός, πλησθῆναι μὲν αὐτήν, οὐ μείναντος δὲ τοῦ ὕδατος ἀλλ' ἐκλιπόντος χειμῶνος οὐ γενέσθαι τὸν κάλαμον· φασὶ γὰρ καὶ δοκεῖ βαθυνομένης τῆς λίμνης αὐξάνεσθαι τὸν κάλαμον εἰς μῆκος, μείναντα δὲ τὸν ἐπιόντα ἐνιαυτὸν ἀδρύνεσθαι· καὶ γίνεσθαι τὸν μὲν ἀδρυθέντα ζευγίτην, ᾧ δ' ἂν μὴ συμπαραμείνῃ τὸ ὕδωρ βομβυκίαν. τὴν μὲν οὖν γένεσιν εἶναι τοιαύτην.

[4] Διαφέρειν δὲ τῶν ἄλλων καλάμων ὡς καθ' ὅλου λαβεῖν εὐτροφία τινὴ τῆς φύσεως· εὐπληθέστερον γὰρ εἶναι καὶ εὐσαρκότερον καὶ ὅλως δὲ θῆλυν τῇ προσόψει. καὶ γὰρ τὸ φύλλον πλατύτερον ἔχειν καὶ λευκότερον τὴν δὲ ἀνθήλην ἐλάττω τῶν ἄλλων, τινὰς δὲ ὅλως οὐκ ἔχειν, οὓς καὶ προσαγορεύουσιν εὐνουχίας· ἐξ ὧν ἄριστα μὲν φασὶ τινες γίνεσθαι τὰ ζεύγη, κατορθοῦν δὲ ὀλίγα παρὰ τὴν ἐργασίαν.

Τὴν δὲ τομὴν ὠραίαν εἶναι πρὸ Ἀντιγενίδου μὲν, ἥνικ' ἠϋλοῦν ἀπλάστως, ὑπ' Ἀρκτουρον Βοηδρομιῶνος μηνός· τὸν γὰρ οὕτω τμηθέντα συχνοῖς μὲν ἔτεσιν ὕστερον γίνεσθαι χρήσιμον καὶ προκαταυλήσεως δεῖσθαι πολλῆς, συμμύειν δὲ τὸ στόμα τῶν γλωττῶν, ὃ πρὸς τὴν διακτηρίαν εἶναι [5] χρήσιμον. ἐπεὶ δὲ εἰς τὴν πλάσιν μετέβησαν, καὶ ἡ τομὴ μετεκινήθη· τέμνουσι γὰρ δὴ νῦν τοῦ Σκιρροφοριῶνος καὶ Ἑκατομβαιῶνος ὥσπερ πρὸ τροπῶν μικρὸν ἢ ὑπὸ τροπᾶς. γίνεσθαι δέ φασι τρίενόν τε χρήσιμον καὶ καταυλήσεως βραχείας δεῖσθαι καὶ κατασπάσματα τὰς γλώττας ἴσχειν· τοῦτο δὲ ἀναγκαῖον τοῖς μετὰ πλάσματος αὐλοῦσι. τοῦ μὲν οὖν ζευγίτου ταύτας εἶναι τὰς ὥρας τῆς τομῆς.

[6] Ἡ δ' ἐργασία γίνεται τοῦτον τὸν τρόπον· ὅταν συλλέξωσι τιθέασιν ὑπαίθριον τοῦ χειμῶνος ἐν τῷ λέμματι· τοῦ δ' ἥρος περικαθάραντες καὶ ἐκτρίψαντες εἰς τὸν ἥλιον ἔθεσαν. τοῦ θέρους δὲ μετὰ ταῦτα συντεμόντες εἰς τὰ μεσογονάτια πάλιν ὑπαίθριον τιθέασιν χρόνον τινά. προσλείπουσι δὲ τῷ μεσογονατίῳ τὸ πρὸς τοὺς βλαστοὺς γόνυ· τὰ δὲ μήκη τὰ τούτων οὐ γίνεται

διπαλαίστων ἐλάττω. βέλτιστα μὲν οὖν εἶναι τῶν μεσογονατίων πρὸς τὴν ζευγοποιῖαν ὅλου τοῦ καλάμου τὰ μέσα· μαλακώτατα δὲ ἴσχειν ζεύγη τὰ πρὸς τοὺς [7] βλαστούς, σκληρότατα δὲ τὰ πρὸς τῇ ρίζῃ· συμφωνεῖν δὲ τὰς γλώττας τὰς ἐκ τοῦ αὐτοῦ μεσογονατίου, τὰς δὲ ἄλλας οὐ συμφωνεῖν· καὶ τὴν μὲν πρὸς τῇ ρίζῃ ἀριστερὰν εἶναι, τὴν δὲ πρὸς τοὺς βλαστοὺς δεξιάν. τμηθέντος δὲ δίχα τοῦ μεσογονατίου τὸ στόμα τῆς γλώττης ἐκατέρας γίνεσθαι κατὰ τὴν τοῦ καλάμου τομὴν· ἐὰν δὲ ἄλλον τρόπον ἐργασθῶσιν αἱ γλώτται, ταύτας οὐ πάνυ συμφωνεῖν· ἡ μὲν οὖν ἐργασία τοιαύτη.

[8] Φύεται δὲ πλεῖστος μὲν μεταξὺ τοῦ Κηφισοῦ καὶ τοῦ Μέλανος· οὗτος δὲ ὁ τόπος προσαγορεύεται μὲν Πελεκανία· τούτου δ' ἔστιν ἅττα Χύτροι καλούμενοι βαθύσματα τῆς λίμνης, ἐν οἷς κάλλιστόν φασι γίνεσθαι· <γίνεσθαι> δὲ καὶ καθ' ὃ ἡ Προβατία καλουμένη καταφέρεται· τοῦτο δ' ἐστὶ ποταμὸς ῥέων ἐκ Λεβαδείας. κάλλιστος δὲ δοκεῖ πάντων γίνεσθαι περὶ τὴν Ὁξεῖαν καλουμένην Καμπὴν· ὁ δὲ τόπος οὗτός ἐστιν ἐμβολὴ τοῦ Κηφισοῦ. γειννῶ δ' αὐτῷ πεδίον εὐγείων, ὃ [9] προσαγορεύουσι Ἰππίαν. πρόσβορος δὲ τόπος ἄλλος τῆς Ὁξεῖας Καμπῆς ἐστίν, ὃν καλοῦσι Βοηδρίαν· φύεσθαι δὲ φασι καὶ κατὰ ταύτην εὐγενῆ τὸν κάλαμον. τὸ δὲ ὅλον, οὗ ἂν ἦ βαθύγειον καὶ εὐγείων χωρίον καὶ ἰλυῶδες καὶ ὁ Κηφισὸς ἀναμίσγεται καὶ πρὸς τούτοις βάθυσμα τῆς λίμνης, κάλλιστον γίνεσθαι κάλαμον. περὶ γὰρ τὴν Ὁξεῖαν Καμπὴν καὶ τὴν Βοηδρίαν πάντα ταῦτα ὑπάρχειν. ὅτι δὲ ὁ Κηφισὸς μέγαλην ἔχει ῥοπὴν εἰς τὸ ποιεῖν καλὸν τὸν κάλαμον σημεῖον ἔχουσι· καθ' ὃν γὰρ τόπον ὁ Μέλας καλούμενος ἐμβάλλει βαθείας οὔσης τῆς λίμνης καὶ τοῦ ἐδάφους εὐγείου καὶ ἰλυώδους, ἢ ὅλως μὴ γίνεσθαι ἢ φαῦλον. ἡ μὲν οὖν γένεσις καὶ φύσις τοῦ αὐλητικοῦ καὶ ἡ κατεργασία καὶ τίνας ἔχει διαφορὰς πρὸς τοὺς ἄλλους ἱκανῶς εἰρήσθω.

[10] Γένη δὲ οὐ ταῦτα μόνον ἀλλὰ πλείω τοῦ καλάμου τυγχάνει φανεράς ἔχοντα τῇ αἰσθήσει διαφοράς· ὁ μὲν γὰρ πυκνὸς καὶ τῇ σαρκὶ καὶ τοῖς γόνασιν, ὁ δὲ μανὸς καὶ ὀλιγογόνατος· καὶ ὁ μὲν κοῖλος, ὃν καλοῦσιν τινες συριγγίαν, οὐδὲν γὰρ ὥς εἰπεῖν ἔχει ξύλου καὶ σαρκός· ὁ δὲ στερεὸς καὶ συμπλήρης μικροῦ. καὶ ὁ μὲν βραχύς, ὁ δὲ εὐανξὴς καὶ ὑψηλὸς καὶ παχύς. ὁ δὲ λεπτὸς καὶ πολύφυλλος, ὁ δὲ ὀλιγόφυλλος καὶ μονόφυλλος. ὅλως δὲ πολλάί τινες εἰσι διαφοραὶ κατὰ τὰς χρεῖας· ἕκαστος γὰρ πρὸς ἕκαστα χρήσιμος.

[11] Ὀνόμασι δὲ ἄλλοι ἄλλοις προσαγορεύουσι· κοινότατον δὲ πως ὁ δόναξ, ὃν καὶ λοχμωδέστατόν γέ φασιν εἶναι καὶ μάλιστα φύεσθαι παρὰ τοὺς

ποταμούς και τὰς λίμνας. διαφέρειν δ' ὅμως παντὸς καλάμου πολὺ τὸν τε ἐν τῷ ξηρῷ καὶ τὸν ἐν τοῖς ὕδασι φυόμενον. ἴδιος δὲ καὶ ὁ τοξικός, ὃν δὴ Κρητικόν τινες καλοῦσιν· ὀλιγογόνατος μὲν σαρκωδέστερος δὲ πάντων καὶ μάλιστα κάμψιν δεχόμενος, καὶ ὅλως ἄγεσθαι δυνάμενος ὥς ἂν θέλῃ τις θερμαίνόμενος.

[12] Ἐχουσι δέ, ὥσπερ ἐλέχθη, καὶ κατὰ τὰ φύλλα μεγάλας διαφορὰς οὐ πλήθει καὶ μεγέθει μόνον ἀλλὰ καὶ χροίᾳ. ποικίλος γὰρ ὁ Λακωνικός καλούμενος. ἔτι δὲ τῇ θέσει καὶ προσφύσει· κάτωθεν γὰρ ἔνιοι πλεῖστα φέρουσι τῶν φύλλων, αὐτὸς δὲ ὥσπερ ἐκ θάμνου πέφυκε. σχεδὸν δὲ τινὲς φασὶ καὶ τῶν λιμναίων ταύτην εἶναι τὴν διαφοράν, τὸ πολύφυλλον καὶ παρόμοιον ἔχειν τρόπον τινὰ τὸ φύλλον τῷ τοῦ κυπεύρου καὶ φλεῶ καὶ θρύου καὶ βουτόμου· σκέψασθαι δὲ δεῖ τοῦτο.

[13] Γένος δέ τι καλάμου φύεται καὶ ἐπίγειον, ὃ οὐκ εἰς ὀρθὸν ἀλλ' ἐπὶ γῆς ἀφίησι τὸν καυλόν, ὥσπερ ἡ ἄγρωστις, καὶ οὕτως ποιεῖται τὴν αὔξησιν. ἔστι δὲ ὁ μὲν ἄρρην στερεός, καλεῖται δὲ ὑπὸ τινων εἰλετίας ...

Ὁ δὲ Ἰνδικὸς ἐν μεγίστῃ διαφορᾷ καὶ ὥσπερ ἕτερον ὅλως τὸ γένος· ἔστι δὲ ὁ μὲν ἄρρην στερεός, ὁ δὲ θήλυσ κοῖλος· διαιροῦσι γὰρ καὶ τοῦτον τῷ ἄρρενι καὶ θήλει. φύονται δ' ἐξ ἐνὸς πυθμένος πολλοὶ καὶ οὐ λοχμώδεις· τὸ δὲ φύλλον οὐ μακρὸν ἀλλ' ὅμοιον τῇ ἰτέᾳ· τῷ δὲ μεγέθει μεγάλοι καὶ εὐπαγεῖς, ὥστε ἀκοντίοις χρῆσθαι. φύονται δὲ οὗτοι περὶ τὸν Ἀκεσίνην ποταμόν. ἅπας δὲ κάλαμος εὐζῶος καὶ τεμνόμενος καὶ ἐπικαιόμενος καλλίων βλαστάνει· ἔτι δὲ παχύρριζος καὶ πολύρριζος, δι' ὃ καὶ δυσώλεθρος. ἡ δὲ ῥίζα γονατώδης, ὥσπερ ἡ τῆς ἀγρωστίδος, πλὴν οὐ παντὸς ὁμοίως. ἀλλὰ περὶ μὲν καλάμων ἱκανῶς εἰρήσθω.

[12.1] Κατάλοιπον δὲ εἰπεῖν ὡσὰν ἐκ τοῦ γένους τούτου περὶ σχοίνου· καὶ γὰρ καὶ τοῦτο τῶν ἐνύδρων θετέον. ἔστι δὲ αὐτοῦ τρία εἶδη, καθάπερ τινὲς διαιροῦσιν, ὃ τε ὀξὺς καὶ ἄκαρπος, ὃν δὴ καλοῦσιν ἄρρενα, καὶ ὁ κάρπιμος, ὃν μελαγκρανὶν καλοῦμεν διὰ τὸ μέλανα τὸν καρπὸν ἔχειν, παχύτερος δὲ οὗτος καὶ σαρκωδέστερος· καὶ τρίτος τῷ μεγέθει καὶ τῇ παχύτητι καὶ εὐσαρκίᾳ διαφέρων ὁ καλούμενος ὀλόσχοινος.

[2] Ἡ μὲν οὖν μελαγκρανὶς αὐτὸς τις καθ' αὐτόν· ὁ δ' ὀξὺς καὶ ὀλόσχοινος ἐκ τοῦ αὐτοῦ φύονται· ὁ καὶ ἄτοπον φαίνεται, καὶ θαυμαστόν γ' ἦν ἰδεῖν ὅλης κομισθείσης τῆς σχοινιάς· οἱ πολλοὶ γὰρ ἦσαν ἄκαρποι πεφυκότες ἐκ τοῦ αὐτοῦ, κάρπιμοι δὲ ὀλίγοι. τοῦτο μὲν οὖν ἐπισκεπτέον. ἐλάττους δὲ ὅλως οἱ κάρπιμοι· πρὸς γὰρ τὰ πλέγματα χρησιμώτερος ὁ ὀλόσχοινος διὰ τὸ σαρκῶδες

καὶ μαλακόν. κορυνᾷ δ' ὅλως ὁ κάρπιμος ἐξ αὐτοῦ τοῦ γραμμώδους ἐξοιδήσας, κᾶπειτα ἐκτίκτει καθάπερ ὠά. πρὸς μιᾷ γὰρ ἀρχῇ γραμμώδει ἔχει τοὺς περισταχυώδεις μίσχους, ἐφ' ὧν ἄκρων παραπλαγίους τὰς τῶν ἀγγείων ἔχει στρογγυλότητας ὑποχασκούσας· ἐν τούτοις δὲ τὸ σπερμάτιον ἀκιδῶδες ἐστὶ μέλαν ἐκάστω προσεμφερές [3] τῷ τοῦ ἀστερίσκου πλὴν ἀμεννότερον. ρίζαν δὲ ἔχει μακρὰν καὶ παχυτέραν πολὺ τοῦ σχοίνου· αὕτη δ' αὐαίνεται καθ' ἕκαστον ἐνιαυτόν, εἴθ' ἑτέρα πάλιν ἀπὸ τῆς κεφαλῆς τοῦ σχοίνου καθιέται· τοῦτο δὲ καὶ ἐν τῇ ὄψει φανερόν ἰδεῖν τὰς μὲν αὔας τὰς δὲ χλωρὰς καθιεμένας· ἡ δὲ κεφαλὴ ὁμοία τῇ τῶν κρομύων καὶ τῇ τῶν γητειών, συμπεφυκυῖα πῶς ἐκ πλειόνων εἰς ταῦτόν καὶ πλατεῖα κάτωθεν ἔχουσα κελύφη ὑπέρυθρα. συμβαίνει δ' οὖν ἴδιον ἐπὶ τῶν ριζῶν εἰ αὐαίνονται κατ' ἐνιαυτόν καὶ ἐκ τοῦ ἄνωθεν πάλιν ἡ γένεσις. τῶν μὲν οὖν σχοίνων τοιαύτη τις φύσις.

[4] Εἰ δὲ καὶ ὁ βάτος καὶ ὁ παλίουρος ἔνυδρά πῶς ἐστὶν ἢ πάρυδρα, καθάπερ ἐνιαχοῦ, φανεραὶ σχεδὸν καὶ αἱ τούτων διαφοραὶ· περὶ ἀμφοῖν γὰρ εἴρηται πρότερον.

[Τῶν δὲ νήσων τῶν πλοάδων τῶν ἐν Ὀρχομενῷ τὰ μὲν μεγέθη παντοδαπὰ τυγχάνει, τὰ δὲ μέγιστα αὐτῶν ἐστὶν ὅσον τριῶν σταδίων τὴν περίμετρον. ἐν Αἰγύπτῳ δὲ μάλιστα μεγάλα σφόδρα συνίσταται, ὥστε καὶ ὅς ἐν αὐταῖς ἐγγίνεσθαι πολλούς, οὓς καὶ κυνηγετοῦσι διαβαίνοντες.] καὶ περὶ μὲν ἐνύδρων ταῦτ' εἰρήσθω.

[13.1] Περὶ δὲ βραχυβιότητος φυτῶν καὶ δένδρων τῶν ἐνύδρων ἐπὶ τοσοῦτον ἔχομεν ὥς ἂν καθ' ὅλου λέγοντες, ὅτι βραχυβιώτερα τῶν χερσαίων ἐστί, καθάπερ καὶ τὰ ζῶα. τοὺς δὲ καθ' ἕκαστον βίους ἱστορῆσαι δεῖ τῶν χερσαίων. τὰ μὲν οὖν ἄγρια φασιν οὐδεμίαν ἔχειν ὥς εἰπεῖν οἱ ὀρεοτύποι διαφοράν, ἀλλὰ πάντα εἶναι μακρόβια καὶ οὐθὲν βραχύβιον· αὐτὸ μὲν τοῦτο ἴσως ἀληθές λέγοντες· ἅπαντα γὰρ ὑπερτείνει πολὺ τὴν τῶν ἄλλων ζωὴν. οὐ μὴν ἀλλ' ὅμως ἐστὶ τὰ μὲν μᾶλλον τὰ δ' ἥττον μακρόβια, καθάπερ ἐν τοῖς ἡμέροις· ποῖα δὲ ταῦτα σκεπτέον. τὰ δὲ ἡμερα φανερώς διαφέρει τῷ τὰ μὲν εἶναι μακρόβια τὰ δὲ βραχύβια· ὥς δ' ἀπλῶς εἰπεῖν τὰ ἄγρια τῶν ἡμέρων μακροβιώτερα καὶ ὅλως τῷ γένει καὶ τὰ ἀντιδιηρημένα καθ' ἕκαστον, οἷον κότινος ἐλάας καὶ ἀχρὰς ἀπίου ἐρινεὸς συκῆς· ἰσχυρότερα γὰρ καὶ πυκνότερα καὶ ἀγονώτερα τοῖς περικαρπίοις.

[2] Τὴν δὲ μακροβιότητα μαρτυροῦσιν ἐπὶ γέ τινων καὶ ἡμέρων καὶ ἀγρίων καὶ αἱ παραδεδομένα φῆμαι παρὰ τῶν μυθολόγων· ἐλάαν μὲν γὰρ λέγουσι τὴν Ἀθήνησι, φοίνικα δὲ τὸν ἐν Δήλῳ, κότινον δὲ τὸν ἐν Ὀλυμπίᾳ, ἀφ' οὗ ὁ

στέφανος· φηγοὺς δὲ τὰς ἐν Ἰλίῳ τὰς ἐπὶ τοῦ Ἰλου μνήματος· τινὲς δὲ φασι καὶ τὴν ἐν Δελφοῖς πλάτανον Ἀγαμέμνονα φυτεῦσαι καὶ τὴν ἐν Καφύαις τῆς Ἀρκαδίας. ταῦτα μὲν οὖν ὅπως ἔχει τάχ' ἂν ἕτερος εἴη λόγος· ὅτι δέ ἐστι μεγάλη διαφορὰ τῶν δένδρων φανερόν· μακρόβια μὲν γὰρ τὰ τε προειρημένα καὶ ἕτερα πλείω· βραχύβια δὲ καὶ τὰ τοιαῦτα ὁμολογουμένως, οἷον ροιὰ συκῇ μηλέα, καὶ τούτων ἡ ἡρινὴ μᾶλλον καὶ ἡ γλυκεῖα τῆς ὀξείας, ὥσπερ τῶν ῥοῶν ἡ ἀπύρηνος. βραχύβια δὲ καὶ ἀμπέλων ἓνια γένη καὶ μάλιστα τὰ πολύκαρπα· δοκεῖ δὲ καὶ τὰ πάρυδρα βραχυβιώτερα τῶν ἐν τοῖς ξηροῖς εἶναι, οἷον ἰτέα λευκὴ ἀκτὴ αἰγείρος.

[3] Ἔνια δὲ γηράσκει μὲν καὶ σήπεται ταχέως, παραβλαστάνει δὲ πάλιν ἐκ τῶν αὐτῶν, ὥσπερ αἱ δάφναι καὶ αἱ μηλέαι τε καὶ αἱ ῥοαὶ καὶ τῶν φυλῶν τὰ πολλά· περὶ ὧν καὶ σκέψαιτ' ἂν τις πότερα ταῦτα δεῖ λέγειν ἢ ἕτερα· καθάπερ εἴ τις τὸ στέλεχος ἀποκόψας, ὥσπερ ποιοῦσιν οἱ γεωργοί, πάλιν ἀναθεραπεύοι τοὺς βλαστούς, ἢ εἰ καὶ ὅλως ἐκκόψειεν ἄχρι τῶν ῥιζῶν καὶ ἐπικαύσειεν· καὶ γὰρ ταῦτα ποιοῦσιν, ὅτε δὲ καὶ ἀπὸ τοῦ αὐτομάτου συμβαίνει· πότερα δὲ τοῦτο ταῦτο δεῖ λέγειν ἢ ἕτερον; ἢ μὲν γὰρ αἰετὰ μέρη τὰς αὐξήσεις καὶ φθίσεις φαίνεται παραλλάττοντα καὶ ἔτι τὰς διακαθάρσεις τὰς ὑπ' αὐτῶν, ταύτῃ μὲν ἂν δόξειε ταῦτόν εἶναι· τί γὰρ ἂν ἐπὶ τούτων [4] ἢ ἐκείνων διαφέρει; ἢ δ' ὥσπερ οὐσία καὶ φύσις τοῦ δένδρου μάλιστα· ἂν φαίνοιτο τὸ στέλεχος, ὅταν μεταλλάττῃ τοῦτο, κἂν τὸ ὅλον ἕτερον ὑπολάβοι τις, εἰ μὴ ἄρα διὰ τὸ ἀπὸ τῶν αὐτῶν ἀρχῶν εἶναι ταῦτο θεῖν· καίτοι πολλάκις συμβαίνει καὶ τὰς ῥίζας ἐτέρας εἶναι καὶ μεταβάλλειν τῶν μὲν σηπομένων τῶν δ' ἐξ ἀρχῆς βλαστανουσῶν. ἐπεὶ, ἐὰν ἀληθὲς ᾖ, ὥς γέ τινες φασι, τὰς ἀμπέλους μακροβιωτάτας εἶναι τῷ μὴ φυεῖν ἐτέρας ἀλλ' ἐξ αὐτῶν αἰεὶ συναναπληροῦσθαι, γελοῖον ἂν ἴσως δοκοίη τοιαύτῃ σύγκρισιν ἐὰν <μὴ> μένῃ τὸ στέλεχος· αὕτῃ γὰρ οἷον ὑπόθεσις καὶ φύσις δένδρων. τοῦτο μὲν οὖν ὁποτέρως ποτὲ λεκτέον οὐθὲν ἂν διενέγκαι [5] πρὸς τὰ νῦν. τάχα δ' ἂν εἴη μακροβιώτατον τὸ πάντως δυνάμενον ἀνταρκεῖν, ὥσπερ ἡ ἐλάα καὶ τῷ στελέχει καὶ τῇ παραβλαστήσει καὶ τῷ δυσωλέθρῳ ἔχειν τὰς ῥίζας. δοκεῖ δὲ ὁ βίος τῆς γε μιᾶς εἶναι, καθ' ὃν τὸ στέλεχος δεῖ τὴν ἀρχὴν τιθέντα μέτρον ἀναμετρεῖν τὸν χρόνον, μάλιστα περὶ ἔτη διακόσια. εἰ δ' ὅπερ ἐπὶ τῶν ἀμπέλων λέγουσιν τινες, ὥς παραιρουμένων τῶν ῥιζῶν κατὰ μέρος δύναται διαμένειν τὸ στέλεχος, καὶ ἡ ὅλη φύσις ὁμοία καὶ ὁμοιοφόρος ὁποσονοῦν χρόνον, μακροβιώτατον ἂν εἴη πάντων. φασὶ δὲ δεῖν οὕτω ποιεῖν ὅταν ἡδη δοκῇ καταφέρεσθαι· κλήματά τε ἐπιβάλλειν καὶ καρποῦσθαι τὸν ἐνιαυτόν·

μετά δὲ ταῦτα κατασκάναντα ἐπὶ θάτερα τῆς ἀμπέλου περικαθᾶραι πάσας τὰς
ρίζας, εἴτ' ἐμπλήσαι φρυγάνων καὶ ἐπαμήσασθαι [6] τὴν γῆν· τούτῳ μὲν οὖν τῷ
ἔτει κακῶς φέρειν σφόδρα, τῷ δ' ὑστέρω βέλτιον, τῷ δὲ τρίτῳ καὶ τετάρτῳ
καθίστασθαι καὶ φέρειν πολλοὺς καὶ καλοὺς, ὥστε μηδὲν διαφέρειν ἢ ὅτε
ἤκμαζεν· ἐπειδὴν δὲ πάλιν ἀποπληγῇ, θάτερον μέρος παρασκάπτειν καὶ
θεραπεύειν ὁμοίως, καὶ οὕτως αἰεὶ διαμένειν· ποιεῖν δὲ τοῦτο μάλιστα δι'
ἐτῶν δέκα· δι' ὃ καὶ κόπτειν οὐδέποτε τοὺς τοῦτο ποιοῦντας, ἀλλ' ἐπὶ γενεὰς
πολλὰς ταῦτα τὰ στελέχη διαμένειν, ὥστε μηδὲ μεμνήσθαι τοὺς φυτεύσαντας·
τοῦτο μὲν οὖν ἴσως τῶν πεπειραμένων ἀκούοντα δεῖ πιστεύειν. τὰ δὲ
μακρόβια καὶ βραχύβια διὰ τῶν εἰρημένων θεωρητέον.

[14.1] Νοσήματα δὲ τοῖς μὲν ἀγρίοις οὗ φασι ξυμβαίνειν ὑφ' ὧν ἀναιροῦνται,
φαύλως δὲ διατίθεσθαι καὶ μάλιστα ἐπιδόλως ὅταν χαλαζοκοπηθῇ ἢ
βλαστάνειν μέλλοντα ἢ ἀρχόμενα ἢ ἀνθοῦντα, καὶ ὅταν ἢ πνεῦμα ψυχρὸν ἢ
θερμὸν ἐπιγένηται κατὰ τούτους τοὺς καιροὺς. ὑπὸ δὲ τῶν ὡραίων χειμῶνων
οὐδὲ ἂν ὑπερβάλλοντες ὧσιν οὐδὲν πάσχειν, ἀλλὰ καὶ ξυμφέρειν πᾶσι
χειμασθῆναι· μὴ χειμασθέντα γὰρ κακοβλαστώτερα [2] γίνεσθαι. τοῖς δὲ
ἡμέροις ἐστὶ πλείω νοσήματα, καὶ τὰ μὲν ὥσπερ κοινὰ πᾶσιν ἢ τοῖς πλείστοις
τὰ δ' ἴδια κατὰ γένη. κοινὰ δὴ τό τε σκωληκουῖσθαι καὶ ἀστροβολεῖσθαι καὶ ὁ
σφακελισμός. ἅπαντα γὰρ ὡς εἰπεῖν καὶ σκώληκας ἴσχει πλὴν τὰ μὲν ἐλάττους
τὰ δὲ πλείους, καθάπερ συκῇ μηλέα καὶ ἄπιος. ὡς δὲ ἀπλῶς εἰπεῖν ἥκιστα
σκωληκουῦνται τὰ δριμέα καὶ ὀπώδη, καὶ ἀστροβολεῖται ὡσαύτως· μᾶλλον δὲ
τοῖς νέοις ἢ τοῖς ἐν ἀκμῇ τοῦτο συμβαίνει, πάντων δὲ μάλιστα τῇ τε συκῇ καὶ
τῇ ἀμπέλῳ.

[3] Ἡ δ' ἐλάα πρὸς τῷ τοὺς σκώληκας ἴσχειν, οἱ δὴ καὶ τὴν συκὴν
διαφθείρουσιν ἐντίκτοντες, φύει καὶ ἥλον· οἱ δὲ μύκητα καλοῦσιν, ἔνιοι δὲ
λοπάδα· τοῦτο δ' ἐστὶν οἶον ἡλίου καῦσις. διαφθείρονται δ' ἐνίστε καὶ αἱ νέαι
ἐλάαι διὰ τὴν ὑπερβολὴν τῆς πολυκαρπίας. ἡ δὲ ψώρα καὶ οἱ προσφυόμενοι
κοχλῖαι συκῆς εἰσιν· οὐ πανταχοῦ δὲ τοῦτο συμβαίνει ταῖς συκαῖς, ἀλλ' ἔοικε
καὶ τὰ νοσήματα γίνεσθαι κατὰ τοὺς τόπους, ὥσπερ τοῖς ζώοις· ἐπεὶ παρ'
ἐνίοις οὐ ψωριῶσι, καθάπερ οὐδὲ περὶ τὴν Αἰνείαν.

[4] Ἀλίσκεται δὲ συκῇ μάλιστα καὶ σφακελισμῷ καὶ κράδῳ. καλεῖται δὲ
σφακελισμός μὲν ὅταν αἱ ρίζαι μελανθῶσι, κράδος δ' ὅταν οἱ κλάδοι· καὶ γὰρ
καλοῦσί τινες κράδους, ὅθεν καὶ τοῦνομα τῇ νόσῳ· ὁ δ' ἐρινεὸς οὔτε κραδᾷ
οὔτε σφακελίζει οὔτε ψωριᾷ οὔτε σκωληκουῖται ταῖς ρίζαις ὁμοίως· οὐδὲ δὴ τὰ
ἐρινά τινες ἀποβάλλουσιν οὐδ' ἐὰν ἐμφυτευθῶσιν εἰς συκὴν.

[5] Ἡ δὲ ψώρα μάλιστα γίνεται ὅταν ὕδωρ ἐπὶ Πλειάδι γένηται μὴ πολὺ· ἐὰν δὲ πολὺ, ἀποκλύζεται· συμβαίνει δὲ τότε καὶ τὰ ἐρινὰ ἀπορρεῖν καὶ τοὺς ὀλύνθους. τῶν δὲ σκωλήκων τῶν ἐν ταῖς συκαῖς οἱ μὲν ἐξ αὐτῆς γίνονται οἱ δὲ ἐντίκτονται ὑπὸ τοῦ καλουμένου κεράστου· πάντες δὲ εἰς κεράστην ἀποκαθίστανται· φθέγγονται δὲ οἶον τριγμὸν. νοσεῖ δὲ συκὴ καὶ ἐὰν ἐπομβρία γένηται· τὰ τε γὰρ πρὸς τὴν ρίζαν καὶ αὐτὴ ἡ ρίζα ὥσπερ μαδᾷ· τοῦτο δὲ καλοῦσι λοπᾶν.

[6] ἡ δ' ἄμπελος τραγᾷ· τοῦτο δὲ μάλιστα αὐτῆς ἐστὶ πρὸς τῷ ἀστροβολεῖσθαι, ἢ ὅταν ὑπὸ πνευμάτων βλαστοκοπηθῇ ἢ ὅταν τῇ ἐργασίᾳ συμπάθῃ ἢ τρίτον ὑπτία τμηθῇ.

Ῥυὰς δὲ γίνεται, ὃ καλοῦσιν τινες ψίνεσθαι, ὅταν ἐπινιφθῇ κατὰ τὴν ἀπάνθησιν ἢ ὅταν κρειπτωθῇ· τὸ δὲ πάθος ἐστὶν ὥστε ἀπορρεῖν τὰς ῥᾶγας καὶ τὰς ἐπιμενούσας εἶναι μικράς. ἔνια δὲ καὶ ῥιγώσαντα νοσεῖ, καθάπερ ἡ ἄμπελος· ἀμβλοῦνται γὰρ οἱ ὀφθαλμοὶ τῆς πρωτοτόμου· καὶ πάλιν ὑπερθερμανθέντα· ζητεῖ γὰρ καὶ τούτων τὴν συμμετρίαν ὥσπερ καὶ τῆς τροφῆς. ὅλως δὲ πᾶν τὸ παρὰ φύσιν ἐπικίνδυνον.

[7] Μεγάλα δὲ ξυμβάλλεται καὶ τὰ τραύματα καὶ αἱ πληγαὶ τῶν περισκαπτόντων εἰς τὸ μὴ φέρειν τὰς μεταβολὰς ἢ καυμάτων ἢ χειμώνων· ἀσθενὲς γὰρ ὃν διὰ τὴν ἔλκωσιν καὶ τὸν πόνον εὐχειρωτότατόν ἐστι ταῖς ὑπερβολαῖς. σχεδὸν δέ, ὥς τινες οἶονται, τὰ πλεῖστα τῶν νοσημάτων ἀπὸ πληγῆς γίνεται· καὶ γὰρ τὰ ἀστρόβλητα καλούμενα καὶ τὰ σφακελίζοντα διὰ τὸ ἀπὸ ταύτης εἶναι τῶν ριζῶν τὸν πόνον. οἶονται δὲ καὶ δύο ταύτας εἶναι μόνας νόσους· οὐ μὴν ἀλλὰ τοῦτό γ' οὐκ ἄγαν ὁμολογούμενόν ἐστι.

[Πάντων δ' ἀσθενέστατον ἡ μηλέα ἢ ἡρινὴ καὶ τούτων ἡ γλυκεῖα.]

[8] Ἐνια δὲ πηρώσεις οὐκ εἰς φθορὰν γίνονται ὅλων ἀλλ' εἰς ἀκαρπίαν· οἶον ἐάν τις τῆς πίτυος ἀφέλῃ τὸ ἄκρον ἢ τοῦ φοίνικος, ἄκαρπα γίνεσθαι ἄμφω δοκεῖ καὶ οὐχ ὅλως ἀναιρεῖσθαι.

Γίνονται δὲ νόσοι καὶ τῶν καρπῶν αὐτῶν, ἐὰν μὴ κατὰ καιρὸν τὰ πνεύματα καὶ τὰ οὐράνια γένηται· συμβαίνει γὰρ ὅτε μὲν ἀποβάλλειν γενομένων ἢ μὴ γενομένων ὑδάτων, οἶον τὰς συκάς, ὅτε δὲ χεῖρους γίνεσθαι σηπομένους καὶ καταπνιγομένους ἢ πάλιν ἀναξηραιομένους παρὰ τὸ δέον. χεῖριστον δὲ ἐὰν ἀπανθοῦσι τισιν ἐφύση, καθάπερ ἐλάα καὶ ἀμπέλφ· συναπορρεῖ γὰρ ὁ καρπὸς δι' ἀσθένειαν.

[9] Ἐν Μιλήτῳ δὲ τὰς ἐλάας, ὅταν ὥσι περὶ τὸ ἀνθεῖν, κάμποι κατεσθίουσιν, αἱ μὲν τὰ φύλλα αἱ δὲ τὰ ἄνθη, ἕτεραι τῷ γένει, καὶ ψιλοῦσι τὰ δένδρα·

γίνονται δὲ ἐὰν ᾗ νότια καὶ εὐδιδεινὰ· ἐὰν δὲ ἐπιλάβῃ καύματα ῥήγνυνται.

Περὶ δὲ Τάραντα προφαίνουσι μὲν αἰεὶ πολὺν καρπὸν, ὑπὸ δὲ τὴν ἀπάνθησιν τὰ πολλὰ ἀπόλλυται. τὰ μὲν οὖν τοιαῦτα τῶν τόπων ἴδια.

[10] Γίνεται δὲ καὶ ἄλλο νόσημα περὶ τὰς ἐλάας ἀράχνιον καλούμενον· φύεται γὰρ τοῦτο καὶ διαφθείρει τὸν καρπὸν. ἐπικάει δὲ καὶ καύματά τινα καὶ ἐλάαν καὶ βότρυν καὶ ἄλλους καρπούς. οἱ δὲ καρποὶ σκωληκοῦνται τινων, οἷον ἐλάας ἀπίου μηλέας μεσπίλης ῥόας. καὶ ὁ γε τῆς ἐλάας σκώληξ ἐὰν μὲν ὑπὸ τὸ δέρμα γένηται διαφθείρει τὸν καρπὸν, ἐὰν δὲ τὸν πυρῆνα διαφάγῃ ὠφελεῖ. κωλύεται δὲ ὑπὸ τῷ δέρματι εἶναι ὕδατος ἐπ' Ἀρκτουρῷ γενομένου. γίνονται δὲ καὶ ἐν ταῖς δρυπεπέσι σκώληκες, αἵπερ καὶ χεῖρους εἰς τὴν ῥύσιν· ὅλως δὲ καὶ δοκοῦσιν εἶναι σαπραί· δι' ὃ καὶ γίνονται τοῖς νοτίοις καὶ μᾶλλον ἐν τοῖς ἐφύδροις. ἐγγίνονται δὲ καὶ κνῖπες ἐν τισὶ τῶν δένδρων, ὥσπερ ἐν τῇ δρυὶ καὶ τῇ συκῇ· καὶ δοκοῦσιν ἐκ τῆς ὑγρότητος συνίστασθαι τῆς ὑπὸ τὸν φλοιὸν συνισταμένης· αὕτη δὲ ἐστὶ γλυκεῖα γευομένοις. γίνονται δὲ καὶ ἐν λαχάνοις τισίν, ἔνθα δὲ κάμποι διαφερούσης δῆλον ὅτι τῆς ἀρχῆς.

[11] Καὶ τὰ μὲν νοσήματα σχεδὸν ταῦτα καὶ ἐν τούτοις ἐστίν. ἔνια δὲ πάθη τῶν κατὰ τὰς ὥρας καὶ τῶν κατὰ τοὺς τόπους γινομένων ἀναιρεῖν πέφυκεν, ἃ οὐκ ἂν τις εἴποι νόσους, οἷον λέγω τὴν ἐκπηξιν καὶ ὃ καλοῦσιν τινες καυθμόν. ἄλλα δὲ παρ' ἐκάστοις πέφυκε πνεύματα ἀπολλύναι καὶ ἀποκάειν· οἷον ἐν Χαλκίδι τῆς Εὐβοίας Ὀλυμπίας ὅταν πνεύση μικρὸν πρὸ τροπῶν ἢ μετὰ τροπὰς χειμερινὰς ψυχρός· ἀποκάει γὰρ τὰ δένδρα καὶ οὕτως αὐτὰ ποιεῖ καὶ ξηρὰ ὥς οὐδ' ἂν ὑφ' ἡλίου καὶ χρόνου πολλοῦ γένοιτ' ἂν, δι' ὃ καὶ καλοῦσιν καυθμόν· ἐγένετο δὲ πρότερον πολλάκις ἤδη καὶ ἐπ' Ἀρχίππου δι' ἐτῶν τετταράκοντα σφοδρός.

[12] Πονοῦσι δὲ μάλιστα τῶν τόπων οἱ κοῖλοι καὶ οἱ αὐλῶνες καὶ ὅσοι περὶ τοὺς ποταμοὺς καὶ ἀπλῶς οἱ ἀπνευστότατοι· τῶν δένδρων δὲ μάλιστα συκῇ, δεύτερον δὲ ἐλάα. ἐλάας δὲ μᾶλλον ὁ κότινος ἐπόνησεν ἰσχυρότερος ὢν, ὃ καὶ θαυμαστὸν ἦν· αἱ δὲ ἀμυγδαλαὶ τὸ πάμπαν ἀπαθεῖς· ἀπαθεῖς δὲ καὶ αἱ μηλέαι καὶ αἱ ἄπιοι καὶ αἱ ῥόαι ἐγένοντο· δι' ὃ καὶ τοῦτο ἦν θαυμαστόν. ἀποκάεται δὲ εὐθὺς ἐκ τοῦ στελέχους, καὶ ὅλως δὲ μᾶλλον καὶ πρότερον ὥς εἰπεῖν ἅπτεται <τὰ ἄνω> τῶν κάτω. φανερὰ δὲ γίνεται τὰ μὲν ἅμα περὶ τὴν βλάστησιν, ἢ δὲ ἐλάα διὰ τὸ ἀείφυλλον ὕστερον· ὅσαι μὲν οὖν ἂν φυλλοβολήσωσιν ἀναβιώσκονται πάλιν, ὅσαι δ' ἂν μὴ τελέως ἀπόλλυνται. παρ' ἐνίοις δὲ τινες ἀποκαυθεῖσαι καὶ τῶν φύλλων ἀνανθέντων ἀνεβλάστησαν πάλιν ἄνευ τοῦ ἀποβαλεῖν καὶ τὰ φύλλα ἀνεβίωσεν. ἐνιαχοῦ δὲ καὶ πολλάκις τοῦτο συμβαίνει,

καθάπερ καὶ ἐν Φιλίπποις.

[13] Τὰ δ' ἐκπαγέοντα, ὅταν μὴ τελέως ἀπόληται, τάχιστα ἀναβλαστάνει, ὥστε εὐθὺς τὴν ἄμπελον καρποφορεῖν, ὥσπερ ἐν Θετταλίᾳ. ἐν δὲ τῷ Πόντῳ περὶ Παντικάπαιον αἱ μὲν ἐκπήξεις γίνονται διχῶς, ὅτε μὲν ὑπὸ ψύχους ἐὰν χειμέριον ἦ τὸ ἔτος, ὅτε δὲ ὑπὸ πάγων ἐὰν γε πολὺν χρόνον διαμένωσι. ἀμφοτέρω δὲ μάλιστα γίνονται μετὰ τροπᾶς περὶ τὰς τετταράκοντα. γίνονται δὲ οἱ μὲν πάγοι ταῖς αἰθρίαις, τὰ δὲ ψύχῃ μάλιστα ὑφ' ὧν ἡ ἐκπήξις ὅταν αἰθρίας οὕσης αἱ λεπίδες καταφέρονται. ταῦτα δ' ἐστὶν ὥσπερ τὰ ξύσματα πλὴν πλατύτερα, καὶ φερόμενα φανερά πεσόντα δὲ οὐ διαμένει· περὶ δὲ τὴν Θράκην ἐκπήγνυνται.

[14] Ἀλλὰ γὰρ αἱ μὲν νόσοι πόσαι τε καὶ ποῖαι καὶ τίνες γίνονται καὶ πάλιν αἱ δι' ὑπερβολὴν χειμῶνος ἢ καυμάτων φθοραὶ καὶ αἱ διὰ πνευμάτων ψυχρότητα ἢ θερμότητα διὰ τούτων θεωρεῖσθωσαν· ὧν ἐνίας οὐθὲν ἂν κωλύοι καὶ τοῖς ἀγρίοις εἶναι κοινὰς καὶ κατὰ τὴν ὅλην τῶν δένδρων φθορὰν καὶ ἔτι μᾶλλον κατὰ τὴν τῶν καρπῶν· ὃ καὶ συμβαίνειν ὀρώμεν· οὐκ εὐκαρπεῖ γὰρ οὐδ' ἐκεῖνα πολλάκις, ἀλλ' οὐχ ὁμοίως οἶμαι παρατετήρηται.

[15.1] Λοιπὸν δ' εἰπεῖν ὅσα παραιρουμένων τινῶν μορίων ἀπόλλυται. κοινὴ μὲν δὴ πᾶσι φθορὰ τοῦ φλοιοῦ περιαιρεθέντος κύκλῳ· πᾶν γὰρ ὡς εἰπεῖν οὕτως ἀπόλλυσθαι δοκεῖ πλὴν ἀνδράχλη· καὶ αὕτη δὲ ἐὰν τις τὴν σάρκα σφόδρα πιέσῃ καὶ τὸν μέλλοντα βλαστὸν διακόψῃ· πλὴν εἰ ἄρα φελλοῦ· τοῦτον γὰρ φασὶ καὶ εὐσθενεῖν μᾶλλον περιαιρουμένου δῆλον ὅτι τοῦ ἔξω καὶ τοῦ κάτω πρὸς τῇ σαρκί, καθάπερ καὶ τῆς ἀνδράχλης. ἐπεὶ καὶ τοῦ κεράσου περιαιρεῖται καὶ τῆς ἀμπέλου καὶ τῆς φιλύρας, ἐξ οὗ τὰ σχοινία, καὶ μαλάχης τῶν ἐλαττόνων, ἀλλ' οὐχ ὁ κύριος οὐδ' ὁ πρῶτος, ἀλλ' ὁ ἐπιπολῆς, ὃς καὶ αὐτόματος ἐνίοτε ἀποπίπτει διὰ τὴν ὑπόφυσιν θατέρου.

[2] Καὶ γὰρ φλοιορραγὴ ἔνια τῶν δένδρων ἐστίν, ὥσπερ καὶ ἡ ἀνδράχλη καὶ ἡ πλάτανος. ὡς δὲ τινες οἶονται, πάλιν ὑποφύεται νέος, ὃ δὲ ἔξωθεν ἀποξηραίνεται καὶ ῥήγνυται καὶ αὐτόματος ἀποπίπτει πολλῶν, ἀλλ' οὐχ ὁμοίως ἐπίδηλος. φθείρονται μὲν οὖν, ὡς οἶονται, πάντα περιαιρουμένου, διαφέρει δὲ τῷ θάττον καὶ βραδύτερον καὶ μᾶλλον καὶ ἥττον. ἔνια γὰρ πλείω χρόνον διαμένει, καθάπερ συκῇ καὶ φίλυρα καὶ δρυΐ· οἱ δὲ καὶ ζῆν φασὶ ταῦτα, ζῆν δὲ καὶ πτελέαν καὶ φοίνικα· τῆς δὲ φιλύρας καὶ συμφύεσθαι τὸν φλοιὸν πλὴν μικροῦ· τῶν δὲ ἄλλων οἶον παροῦσθαι καὶ ἰδίαν τινὰ φύσιν ἔχειν. βοηθεῖν δὲ πειρῶνται διαπλάττοντες πηλῷ καὶ περιδοῦντες φλοιοῖς καὶ καλάμοις καὶ τοῖς τοιούτοις, ὅπως μὴ ψύχῃται μηδ' ἀποξηραίνηται. καὶ ἤδη

φασί που ἀναφῦναι, καθάπερ καὶ ἐν Ἡρακλείᾳ τῇ Τραχινίᾳ, [3] τὰς συκᾶς. δεῖ δὲ ἅμα τῇ τῆς χώρας ἀρετῇ καὶ τῇ τοῦ ἀέρος κράσει καὶ τὰ ἐπιγιγνόμενα τοιαῦτα εἶναι· χειμῶνων γὰρ ἢ καυμάτων ἐπιγιγνομένων σφοδρῶν εὐθὺς ἀπόλλυνται· διαφέρουσι δὲ καὶ αἱ ὥραι· περὶ γὰρ τὴν βλάστησιν ἐλάτης ἢ πεύκης, ὅτε καὶ λοπῶσι, τοῦ Θαργηλιῶνος ἢ Σκιρροφοριῶνος ἂν τις περιέλῃ, παραχρῆμα ἀπόλλυται. τοῦ δὲ χειμῶνος πλείω χρόνον ἀντέχει καὶ ἔτι μᾶλλον τὰ ἰσχυρότατα, καθάπερ πρῖνος καὶ δρυς· χρονιωτέρα γὰρ ἢ τούτων φθορά.

[4] δεῖ δὲ καὶ τὴν περιαίρεσιν ἔχειν τι πλάτος, πάντων μὲν μάλιστα δὲ τῶν ἰσχυροτάτων· ἐπεὶ ἂν τις μικρὰν παντελῶς ποιήσῃ, οὐθὲν ἄτοπον τὸ μὴ ἀπόλλυσθαι· καίτοι φασί γέ τινες, ἐὰν ὅποσονοῦν, συμφθεῖρεσθαι πάντως· ἀλλ' ἐπὶ τῶν ἀσθενεστέρων τοῦτ' εἰκός. ἓνια γὰρ κἂν μὴ κύκλῳ περιαιρεθῇ φθείρεσθαι φασιν, ἃ καὶ λυπρὰν ἔχει χώραν καὶ ἄτροφον. αὕτη μὲν δὴ, καθάπερ εἴρηται, κοινὴ φθορὰ πάντων.

[16.1] Ἦν δὲ καλοῦσιν ἐπικοπὴν τῶν δένδρων, μόνον πεύκης ἐλάτης πίτυος φοίνικος, οἱ δὲ καὶ κέδρου καὶ κυπαρίττου φασί. ταῦτα γάρ, ἐὰν περιαιρεθῇ τὴν κόμην ἄνωθεν καὶ ἐπικοπῇ τὸ ἄκρον, φθείρεται πάντα καὶ οὐ βλαστάνει, καθάπερ οὐδ' ἐπικαυθέντα ἢ πάντα ἢ ἓνια. τὰ δ' ἄλλα πάντα καὶ περικοπέντα βλαστάνει, καὶ ἓνιά γε καλλίῳ γίνεται, καθάπερ ἡ ἐλάα. διαφθείρεται δὲ τὰ πολλὰ κἂν σχισθῇ τὸ στέλεχος· οὐδὲν γὰρ ὑπομένειν δοκεῖ πλὴν ἀμπέλου καὶ συκῆς καὶ ρόας καὶ μηλέας· ἓνια δὲ κἂν ἑλκωθῇ καὶ μεῖζον καὶ βαθύτερον ἀπόλλυται. τὰ δ' οὐδὲν πάσχει, καθάπερ ἡ πεύκη δαδουργουμένη, καὶ ἐξ ὧν δὴ τὰς ῥητίνας συλλέγουσιν, οἷον ἐλάτης τερμίνθου· καὶ γὰρ δὴ τούτων εἰς βάθος ἢ τρωσὶς καὶ ἑλκωσὶς. καὶ γὰρ ἐξ ἀφόρων φοράδες γίνονται καὶ ἐξ ὀλιγοφόρων πολυφόροι.

[2] Τὰ δὲ καὶ πελέκησιν ὑπομένει καὶ ὀρθὰ καὶ πεσόντα ὑπὸ πνεύματος, ὥστε πάλιν ἀνίστασθαι καὶ ζῆν καὶ βλαστάνειν, οἷον ἰτέα καὶ πλάτανος. ὅπερ συνέβη καὶ ἐν Ἀντάνδρῳ καὶ ἐν Φιλίπποις· ἐκπεσοῦσης γὰρ ὥς ἀπέκοψαν τοὺς ἀκρεμόνας καὶ ἐπελέκησαν, ἀνεφύη νύκτωρ ἡ πλάτανος κουφισθεῖσα τοῦ βάρους καὶ ἀνεβίω καὶ ὁ φλοιὸς περιέφυε πάλιν. παραπεπελεκημένη δ' ἐτύγχανεν ἐκ τῶν δύο μερῶν· ἦν δὲ τὸ δένδρον μέγα μῆκος μὲν μεῖζον ἢ δεκάπηχυν, πάχος δ' ὥστε μὴ ῥαδίως [3] ἂν περιλαβεῖν τέτταρας ἄνδρας. ἡ δὲ ἐν Φιλίπποις ἰτέα περιεκόπη μὲν τοὺς ἀκρεμόνας, οὐ μὴν παρεπελεκήθη. μάντις δέ τις ἔπεισεν αὐτοὺς θυσίαν τε ποιεῖσθαι καὶ τηρεῖν τὸ δένδρον ὥς σημεῖον ἀγαθὸν γεγονός. ἀνέστη δὲ καὶ ἐν Σταγεῖροις ἐν τῷ μουσεῖῳ λευκὴ τις ἐκπεσοῦσα.

[4] Τῆς δὲ μήτρας ἐξαιρουμένης οὐθὲν ὡς εἰπεῖν φθείρεται δένδρον. σημεῖον δὲ ὅτι πολλὰ κοῖλα τῶν μέγεθος ἔχόντων δένδρων ἐστίν. οἱ δὲ περὶ Ἀρκαδίαν φασὶ μέχρι τινὸς μὲν ζῆν τὸ δένδρον, τελέως δὲ ἐξ ἅπαντος ἐξαιρεθείσης καὶ πεύκην φθείρεσθαι καὶ ἐλάτην καὶ ἄλλο πᾶν.

[5] Κοινὴ δὲ φθορὰ πάντων κἄν αἱ ρίζαι περικοπῶσιν ἢ πᾶσαι ἢ αἱ πλεῖσται καὶ μέγισται καὶ κυριώταται τοῦ ζῆν. αὗται μὲν οὖν ἐξ ἀφαιρέσεως.

Ἡ δ' ὑπὸ τοῦ ἐλαίου προσθέσει τινὶ μᾶλλον ἢ ἀφαιρέσει· πολέμιον γὰρ δὴ καὶ τοῦτο πᾶσι· καὶ ἔλαιον ἐπιχέουσι τοῖς ὑπολείμμασι τῶν ριζῶν. ἰσχύει δὲ μᾶλλον τὸ ἔλαιον ἐν τοῖς νέοις καὶ ἄρτι φυομένοις· ἀσθενέστερα γάρ, δι' ὃ καὶ ἄπτεσθαι κωλύουσι.

Φθοραὶ δὲ καὶ ὑπ' ἀλλήλων εἰσὶ τῷ παραιεῖσθαι τὰς τροφὰς καὶ ἐν τοῖς ἄλλοις ἐμποδίζειν. χαλεπὸς δὲ καὶ ὁ κιττὸς παραφυόμενος, χαλεπὸς δὲ καὶ ὁ κύτισος· ἀπόλλυσι γὰρ πάνθ' ὡς εἰπεῖν· ἰσχυρότερον δὲ τούτου τὸ ἄλιμον· ἀπόλλυσι γὰρ τὸν κύτισον.

[6] Ἐνια δὲ οὐ φθείρει μὲν χεῖρω δὲ ποιεῖ ταῖς δυνάμεσι τῶν χυλῶν καὶ τῶν ὀσμῶν, οἷον ἡ ῥάφανος καὶ ἡ δάφνη τὴν ἄμπελον. ὀσφραίνεσθαι γὰρ φασὶ καὶ ἔλκειν. δι' ὃ καὶ ὅταν ὁ βλαστὸς πλησίον γένηται πάλιν ἀναστρέφειν καὶ ἀφορᾶν ὡς πολεμίας οὔσης τῆς ὀσμῆς. Ἀνδροκύδης δὲ καὶ παραδείγματι τούτῳ κατεχρήσατο πρὸς τὴν βοήθειαν τὴν ἀπὸ τῆς ῥαφάνου γινομένην πρὸς τὸν οἶνον, ὡς ἐξελαύνουσιν τὴν μέθην· φεύγειν γὰρ δὴ καὶ ζῶσαν τὴν ἄμπελον τὴν ὀσμήν. αἱ μὲν οὖν φθοραὶ πῶς τε γίνονται καὶ πόσαι καὶ ποσαχῶς φανερόν ἐκ τῶν προειρημένων.

Liber V

[1] Περὶ δὲ τῆς ὕλης, ποία τέ ἐστὶν ἐκάστη, καὶ πόθ' ὥραία τέμνεσθαι, καὶ πρὸς ποία τῶν ἔργων χρησίμη, καὶ ποία δύσεργος ἢ εὐεργος, καὶ εἴ τι ἄλλο τῆς τοιαύτης ἱστορίας ἔχεται, πειρατέον ὁμοίως εἰπεῖν.

Ὡραῖα δὴ τέμνεσθαι τῶν ξύλων τὰ μὲν οὖν στρογγύλα καὶ ὅσα πρὸς φλοιισμόν ὅταν βλαστάνῃ· τότε γὰρ εὐπεριαιρέτος ὁ φλοιός, ὃ δὴ καλοῦσι λοπᾶν, διὰ τὴν ὑγρότητα τὴν ὑπογινομένην αὐτῇ. μετὰ δὲ ταῦτα δυσπεριαιρέτος καὶ τὸ ξύλον μέλαν γίνεται καὶ δυσειδές. τὰ δὲ τετράγωνα μετὰ τὸν λοπητόν· ἀφαιρεῖται γὰρ ἡ πελέκησις τὴν δυσειδεῖαν. ὅλως πᾶν πρὸς ἰσχὺν ὥραιότατον οὐ μόνον πεπαυμένον τῆς βλαστήσεως ἀλλ' ἔτι μᾶλλον ἐκπεπᾶναν τὸν καρπὸν. ἀλλὰ διὰ τὸν φλοιισμόν ἁώροις οὖσιν ὥραῖοις συμβαίνει γίνεσθαι τοῖς στρογγύλοις, ὥστε ἐναντία αἱ ὥραι κατὰ συμβεβηκός. εὐχρόστερα δὲ τὰ ἐλάτινα γίνεται κατὰ τὸν πρῶτον λοπητόν.

[2] Ἐπεὶ δὲ μάλιστα ἢ μόνον περιαιροῦσι τὸν φλοιὸν ἐλάτης πεύκης πίτυος, ταῦτα μὲν τέμνεται τοῦ ἥρος· τότε γὰρ ἡ βλάστησις· τὰ δὲ ἄλλα ὅτε μὲν μετὰ πυροτομίαν, ὅτε δὲ μετὰ τρυγητόν καὶ Ἀρκτοῦρον, οἷον ἁρία πετελέα σφένδαμνος μελία ζυγία ὀξύα φύλura φηγός τε καὶ ὅλως ὅσα κατορύττεται· δρυὺς δὲ ὀψιαίτατα κατὰ χειμῶνα μετὰ τὸ μετόπωρον· ἐὰν δὲ ὑπὸ τὸν λοπητόν τηθῇ, σήπεται τάχιστα ὥς εἰπεῖν, ἐὰν τε ἔμφλοιοις ἐὰν τε ἄφλοιοις· καὶ μάλιστα μὲν τὰ ἐν τῷ πρώτῳ λοπητῷ, δεύτερα δὲ τὰ ἐν τῷ δευτέρῳ, τρίτα δὲ καὶ ἥκιστα τὰ ἐν τῷ τρίτῳ· τὰ δὲ μετὰ τὴν πέπανσιν τῶν καρπῶν ἄβρωτα διαμένει, κἂν ἀλόπιστα ἢ· πλὴν ὑπὸ τὸν φλοιὸν ὑποδιδόμενοι σκώληκες ἐπιπολῆς ἐγγράφουσι τὸ στέλεχος, οἷς καὶ σφραγῖσι χρῶνται τινες· ὥραϊον δὲ τηθὲν τὸ δρύϊνον ἄσαπές τε καὶ ἀθριπηδέστατον γίνεται καὶ σκληρόν καὶ πυκνὸν ὥσπερ κέρας· πᾶν γὰρ ὁμοῖον ἐστὶν ἐγκαρδίῳ· πλὴν τό γε τῆς ἀλιφλοίου καὶ τότε φαῦλον.

[3] Συμβαίνει δὲ καὶ τοῦτο ὑπεναντίον, ὅταν τε κατὰ τὴν βλάστησιν τέμνονται καὶ ὅταν μετὰ τοὺς καρπούς. τότε μὲν γὰρ ἀναξηραίνεται τὰ στελέχη καὶ οὐ βλαστάνει τὰ δένδρα· μετὰ δὲ τοὺς καρπούς παραβλαστάνει. δυστομώτερα δὲ διὰ τὴν σκληρότητα κατὰ ταύτην τὴν ὥραν. κελεύουσι δὲ καὶ δεδουκυίας τῆς σελήνης τέμνειν ὥς σκληροτέρων καὶ ἀσαπεστέρων γινομένων. ἐπεὶ δὲ αἱ πέψεις τῶν καρπῶν παραλλάττουσι, δῆλον ὅτι καὶ αἱ ἀκμαὶ πρὸς τὴν τομὴν παραλλάττουσιν· αἰεὶ γὰρ ὀψιαίτεροι αἱ τῶν ὀψικαρποτέρων.

[4] δι' ὃ καὶ πειρῶνται τινες ὀρίζειν καθ' ἐκάστην· οἷον πεύκην μὲν καὶ

ἐλάτην ὅταν ὑπολοπῶσιν· ἔτι δὲ ὀξύαν καὶ φίλυραν καὶ σφένδαμνον καὶ ζυγίαν τῆς ὀπώρας· ὀρῶν δέ, ὥσπερ εἴρηται, μετὰ τὸ φθινόπωρον. φασὶ δὲ τινες πεύκην ὠραίαν εἶναι τοῦ ἥρος, ὅταν γε ἔχη τὴν καλουμένην κάχρυν, καὶ τὴν πίτυν ὅταν ὁ βότρυς αὐτῆς ἀνθῇ. ποῖα μὲν οὖν ὠραῖα καθ' ἕκαστον χρόνον οὕτω διαιροῦνται. πάντων δὲ δῆλον ὅτι βελτίω τὰ τῶν ἀκμαζόντων δένδρων ἢ τῶν νέων κομιδῇ καὶ γεγηρακότων· τὰ μὲν γὰρ ὑδατώδη, τὰ δὲ γεώδη.

[5] Πλείστας δὲ χρείας καὶ μεγίστας ἡ ἐλάτη καὶ ἡ πεύκη παρέχονται, καὶ ταῦτα κάλλιστα καὶ μέγιστα τῶν ξύλων ἐστί. διαφέρουσι δὲ ἀλλήλων ἐν πολλοῖς· ἡ μὲν γὰρ πεύκη σαρκωδεστέρα τε καὶ ὀλιγόϊνος· ἡ δ' ἐλάτη καὶ πολύϊνος καὶ ἄσαρκος, ὥστε ἐναντίως ἐκάτερον ἔχειν τῶν μερῶν, τὰς μὲν ἵνας ἰσχυράς τὴν δὲ σάρκα μαλακὴν καὶ μανήν· δι' ὃ τὸ μὲν βάρυ τὸ δὲ κοῦφον· τὸ μὲν γὰρ ἔνδαδον τὸ δὲ ἄδαδον, ἧ καὶ [6] λευκότερον. ἔχει δὲ καὶ ὄζους πλείους μὲν ἡ πεύκη, σκληροτέρους δὲ ἡ ἐλάτη πολλῶ, μᾶλλον δὲ καὶ σκληροτάτους πάντων· ἄμφω δὲ πυκνοὺς καὶ κερατώδεις καὶ τῷ χρώματι ξανθοὺς καὶ δαδώδεις. ὅταν δὲ τμηθῇσι, ῥεῖ καὶ ἐκ τῶν τῆς ἐλάτης καὶ ἐκ τῶν τῆς πεύκης ἐπὶ πολὺν χρόνον ὑγρότης καὶ μᾶλλον ἐκ τῶν τῆς ἐλάτης. ἔστι δὲ καὶ πολύλοπον ἡ ἐλάτη, καθάπερ καὶ τὸ κρόμουν· αἰεὶ γὰρ ἔχει τινὰ ὑποκάτω τοῦ φαινομένου, καὶ [7] ἐκ τοιούτων ἡ ὅλη. δι' ὃ καὶ τὰς κώπας ζύοντες ἀφαιρεῖν πειρῶνται καθ' ἓνα καὶ ὁμαλῶς· ἐὰν γὰρ οὕτως ἀφαιρῶσιν, ἰσχυρὸς ὁ κωπεών, ἐὰν δὲ παραλλάξωσι καὶ μὴ κατασπῶσιν ὁμοίως, ἀσθενής· πληγὴ γὰρ οὕτως, ἐκείνως δ' ἀφαίρεισις. ἔστι δὲ καὶ μακρότατον ἡ ἐλάτη καὶ ὀρθοφυέστατον. δι' ὃ καὶ τὰς κεραίας καὶ τοὺς ἰστοὺς ἐκ ταύτης ποιοῦσιν. ἔχει δὲ καὶ τὰς φλέβας καὶ τὰς ἵνας [8] ἐμφανεστάτας πάντων. αὐξάνεται δὲ πρῶτον εἰς μῆκος, ἄχρι οὗ δὴ ἐφίκηται τοῦ ἡλίου· καὶ οὔτε ὄζος οὐδεὶς οὔτε παραβλάστησις οὔτε πάχος γίνεται· μετὰ δὲ ταῦτα εἰς βάθος καὶ πάχος· οὕτως αἱ τῶν ὄζων ἐκφύσεις καὶ παραβλαστήσεις.

[9] Ταῦτα μὲν οὖν ἴδια τῆς ἐλάτης, τὰ δὲ κοινὰ καὶ πεύκης καὶ ἐλάτης καὶ τῶν ἄλλων. ἔστι γὰρ ἡ μὲν τετράζοος ἡ δὲ δίζοος. καλοῦσι δὲ τετραζόους μὲν ὅσαις ἐφ' ἐκάτερα τῆς ἐντεριώνης δύο κτηδόνες εἰσὶν ἐναντίαν ἔχουσαι τὴν φύσιν· ἔπειτα καθ' ἐκατέραν τὴν κτηδόνα ποιοῦνται τὴν πελέκησιν ἐναντίας τὰς πληγὰς κατὰ κτηδόνα φέροντες, ὅταν ἐφ' ἐκάτερα τῆς ἐντεριώνης ἡ πελέκησις ἀναστρέφῃ. τοῦτο γὰρ ἐξ ἀνάγκης συμβαίνει διὰ τὴν φύσιν τῶν κτηδόνων. τὰς δὲ τοιαύτας ἐλάτας καὶ πεύκας τετραζόους καλοῦσι. εἰσὶ δὲ καὶ πρὸς τὰς ἐργασίας αὗται κάλλιστα· πυκνότατα γὰρ ἔχουσι τὰ ξύλα καὶ τὰς

αἰγίδας αὐται [10] φύουσιν. αἱ δίζοοι δὲ κτηδόνα μὲν ἔχουσι μίαν ἐφ' ἑκάτερα τῆς ἐντεριώνης, ταύτας δὲ ἐναντίας ἀλλήλαις, ὥστε καὶ τὴν πελέκησιν εἶναι διπλῆν, μίαν καθ' ἑκατέραν κτηδόνα ταῖς πληγαῖς ἐναντίας· ἀπαλώτατα μὲν οὖν ταῦτά φασιν ἔχειν τὰ ξύλα, χείριστα δὲ πρὸς τὰς ἐργασίας· διαστρέφεται γὰρ μάλιστα. μονοξόους δὲ καλοῦσι τὰς ἐχούσας μίαν μόνον κτηδόνα· τὴν δὲ πελέκησιν αὐτῶν γίνεσθαι τὴν αὐτὴν ἐφ' ἑκάτερα τῆς ἐντεριώνης· φασὶ δὲ μανότατα μὲν ἔχειν τῇ φύσει τὰ ξύλα ταῦτα πρὸς δὲ τὰς διαστροφὰς ἀσφαλέστατα.

[11] Διαφορὰς δὲ ἔχουσι τοῖς φλοιοῖς, καθ' ἃς γνωρίζουσιν ἰδόντες εὐθὺς τὸ δένδρον πεφυκὸς ποῖόν τί ἐστι· τῶν γὰρ εὐκτηδόνων καὶ ἀστραβῶν καὶ ὁ φλοιὸς λεῖος καὶ ὀρθός, τῶν δ' ἐναντίων τραχύς τε καὶ διεστραμμένος· ὁμοίως δὲ καὶ ἐπὶ τῶν λοιπῶν. ἀλλ' ἔστι τετράζοα μὲν ὀλίγα μονόζοα δὲ πλείω τῶν ἄλλων. ἅπαντα δὲ ἡ ὕλη μείζων καὶ ὀρθοτέρα καὶ ἀστραβεστέρα καὶ στιφροτέρα καὶ ὅλως καλλίων καὶ πλείων ἢ ἐν τοῖς προσβορείοις, ὥσπερ καὶ πρότερον ἐλέχθη· καὶ αὐτοῦ τοῦ δένδρου δὲ τὰ πρὸς βορρᾶν πυκνότερα καὶ νεανικώτερα. ὅσα δὲ ὑποπαράβορρα καὶ ἐν περίπνῳ, ταῦτα στρέφει καὶ παραλλάττει παρὰ μικρὸν ὁ βορέας, ὥστε εἶναι παρεστραμμένην αὐτῶν τὴν μήτραν καὶ [12] οὐ κατ' ὀρθόν. ἔστι δὲ ὅλα μὲν τὰ τοιαῦτα ἰσχυρὰ τμηθέντα δὲ ἀσθενῇ διὰ τὸ πολλὰς ἔχειν παραλλαγὰς. καλοῦσι δὲ οἱ τέκτονες ἐπίτομα ταῦτα διὰ τὸ πρὸς τὴν χρεῖαν οὕτω τέμνειν. ὅλως δὲ χεῖρω τὰ ἐκ τῶν ἐφύγων καὶ εὐδιεινῶν καὶ παλισκίων καὶ συνηρεφῶν καὶ πρὸς τὴν τεκτονικὴν χρεῖαν καὶ πρὸς τὴν πυρευτικήν. αἱ μὲν οὖν τοιαῦται διαφοραὶ πρὸς τοὺς τόπους εἰσὶν αὐτῶν τῶν ὁμογενῶν ὥς γε ἀπλῶς εἰπεῖν.

[2.1] Διαιροῦσι γάρ τινες κατὰ τὰς χώρας, καὶ φασιν ἀρίστην μὲν εἶναι τῆς ὕλης πρὸς τὴν τεκτονικὴν χρεῖαν τῆς εἰς τὴν Ἑλλάδα παραγινομένης τὴν Μακεδονικὴν· λεῖα τε γὰρ ἐστὶ καὶ ἀστραβῆς καὶ ἔχουσα θυῖον. δευτέραν δὲ τὴν Ποντικήν, τρίτην δὲ τὴν ἀπὸ τοῦ Ῥυνδάκου, τετάρτην δὲ τὴν Αἰνιανικὴν· χειρίστην δὲ τὴν τε Παρνασιακὴν καὶ τὴν Εὐβοϊκὴν· καὶ γὰρ ὀζώδεις καὶ τραχείας καὶ ταχὺ σήπεσθαι. περὶ δὲ τῆς Ἀρκαδικῆς σκεπτέον.

[2] Ἰσχυρότατα δὲ τῶν ξύλων ἐστὶ τὰ ἄοζα καὶ λεῖα· καὶ τῇ ὄψει δὲ ταῦτα κάλλιστα. ὀζώδῃ δὲ γίνεται τὰ κακοτροφηθέντα καὶ ἥτοι χειμῶνι πιεσθέντα ἢ καὶ ἄλλῳ τινὶ τοιούτῳ· τὸ γὰρ ὅλον τὴν πολυοξίαν εἶναι ἔνδειαν εὐτροφίας. ὅταν δὲ κακοτροφήσαντα ἀναλάβῃ πάλιν καὶ εὐσθενήσῃ, συμβαίνει καταπίνεσθαι τοὺς ὄζους ὑπὸ τῆς περιφύσεως· εὐτροφοῦν γὰρ καὶ αὐξανόμενον ἀναλαμβάνει καὶ πολλάκις ἔξωθεν μὲν λεῖον τὸ ξύλον

διαιρούμενον δὲ ὀζῶδες ἐφάνη. δι' ὃ καὶ σκοποῦνται τῶν σχιστῶν τὰς μήτρας· ἐὰν γὰρ αὗται ἔχωσιν ὄζους, ὀζώδη καὶ τὰ ἐκτός· καὶ οὗτοι χαλεπώτεροι τῶν ἐκτὸς καὶ φανεροί.

[3] Γίνονται δὲ καὶ αἱ σπεῖραι διὰ χειμῶνας τε καὶ κακοτροφίαν. σπεῖρας δὲ καλοῦσιν ὅταν ἡ συστροφή τις ἐν αὐτῇ μείζων καὶ κύκλοις περιεχομένη πλείοσιν οὕθ' ὥσπερ ὁ ὄζος ἀπλῶς οὕθ' ὥς ἡ οὐλότης ἢ ἐν αὐτῷ τῷ ξύλῳ· δι' ὅλου γὰρ πως αὕτη καὶ ὁμαλίζουσα· χαλεπώτερον δὲ τοῦτο πολὺ καὶ δυσεργότερον τῶν ὄζων. ἔοικε δὲ παραπλησίως καὶ ὡς ἐν τοῖς λίθοις ἐγγίνεσθαι τὰ καλούμενα κέντρα. ὅτι δ' ἡ περίφυσις καταλαμβάνει τοὺς ὄζους φανερώτατον ἐξ αὐτῆς τῆς αἰσθήσεως, οὐ μὴν ἀλλὰ καὶ ἐκ τῶν ἄλλων [4] τῶν ὁμοίων· πολλάκις γὰρ αὐτοῦ τοῦ δένδρου μέρος τι συνελήφθη ὑπὸ θατέρου συμφυοῦς γενομένου· καὶ ἐὰν τις ἐκγλύψας θῇ λίθον εἰς τὸ δένδρον ἢ καὶ ἄλλο τι τοιοῦτον, κατακρύπτεται περιληφθὲν ὑπὸ τῆς περιφύσεως· ὅπερ καὶ περὶ τὸν κότινον συνέβη τὸν ἐν Μεγάροις τὸν ἐν τῇ ἀγορᾷ· οὗ καὶ ἐκκοπέντος λόγιον ἦν ἀλῶναι καὶ διαρπασθῆναι τὴν πόλιν· ὅπερ ἐγένετο ... Δημήτριος. ἐν τούτῳ γὰρ διασχιζομένῳ κνημίδες εὐρέθησαν καὶ ἄλλ' ἅττα τῆς Ἀττικῆς ἐργασίας κρεμαστά, τοῦ κοτίνου οὗ ἀνετέθη τὸ πρῶτον ἐγκοιλανθέντος. τούτου δ' ἔτι μικρὸν τὸ λοιπόν. πολλαχοῦ δὲ καὶ ἄλλοθι γίνεται πλείονα τοιαῦτα. καὶ ταῦτα μὲν, ὥσπερ εἴρηται κοινὰ πλείονων.

[3.1] Κατὰ δὲ τὰς ἰδίας ἐκάστου φύσεις αἱ τοιαυταί εἰσι διαφοραί, οἷον πυκνότης μανότης βαρύτης κουφότης σκληρότης μαλακότης, ὡσαύτως δὲ καὶ εἴ τις ἄλλη τοιαύτη· κοινὰ δὲ ὁμοίως αὗται καὶ τῶν ἡμέρων καὶ τῶν ἀγρίων, ὥστε περὶ πάντων λεκτέον.

Πυκνότατα μὲν οὖν δοκεῖ καὶ βαρύτατα πύξος εἶναι καὶ ἔβενος· οὐδὲ γὰρ οὐδ' ἐπὶ τοῦ ὕδατος ταῦτ' ἐπινεῖ. καὶ ἡ μὲν πύξος ὅλη, τῆς δὲ ἔβενου ἡ μήτρα, ἐν ἣ καὶ ἡ τοῦ χρώματός ἐστι μελανία. τῶν δ' ἄλλων ὁ λωτός. πυκνὸν δὲ καὶ ἡ τῆς δρυὸς μήτρα, ἣν καλοῦσι μελάνδρυν· καὶ ἔτι μᾶλλον ἡ τοῦ κυτίσου· παρομοία γὰρ αὕτη δοκεῖ τῇ ἔβενῳ εἶναι.

[2] Μέλαν δὲ σφόδρα καὶ πυκνὸν τὸ τῆς τερμίνθου· περὶ γοῦν Συρίαν μελάντερόν φασιν εἶναι τῆς ἔβενου· καὶ ἐκ τούτου γὰρ καὶ τὰς λαβὰς τῶν ἐγχειριδίων ποιεῖσθαι, τορνεύεσθαι δὲ ἐξ αὐτῶν καὶ κύλικας Θηρικλείους, ὥστε μηδένα ἂν διαγινῶναι πρὸς τὰς κεραμέας· λαμβάνειν δὲ τὸ ἐγκάρδιον· δεῖν δὲ ἀλείφειν τὸ ξύλον· οὕτω γὰρ γίνεσθαι καὶ κάλλιον καὶ μελάντερον.

Εἶναι δὲ καὶ ἄλλο τι δένδρον, ὃ ἅμα τῇ μελανίᾳ καὶ ποικιλίᾳ τινὰ ἔχει ὑπέρυθρον, ὥστε εἶναι τὴν ὄψιν ὡσὰν ἔβενου ποικίλης· ποιεῖσθαι δ' ἐξ αὐτοῦ

καὶ κλίνας καὶ δίφρους καὶ τὰ ἄλλα τὰ σπουδαζόμενα. τὸ <δὲ> δένδρον μέγα σφόδρα καὶ καλόφυλλον εἶναι ὅμοιον ταῖς ἀπίοις.

[3] Ταῦτα μὲν οὖν ἅμα τῇ μελανίᾳ καὶ πυκνότητι ἔχει. πυκνὸν δὲ καὶ ἡ σφένδαμνος καὶ ἡ ζυγία καὶ ὅλως πάντα τὰ οὖλα· καὶ ἡ ἐλάα δὲ καὶ ὁ κότινος, ἀλλὰ κραῦρα. μανὰ δὲ τῶν μὲν ἀγρίων καὶ ἐρεψίμων τὰ ἐλάτινα μάλιστα, τῶν δ' ἄλλων τὰ ἄκτινα καὶ τὰ σύκινα καὶ τὰ τῆς μηλέας καὶ τὰ τῆς δάφνης. σκληρότατα δὲ τὰ δρυῖνα καὶ τὰ ζύγινα καὶ τὰ τῆς ἀρίας· καὶ γὰρ ὑποβρέχουσι ταῦτα πρὸς τὴν τρύπησιν μαλάξεως χάριν. μαλακὰ δὲ καθ' ὅλου μὲν τὰ μανὰ καὶ χαῦνα· τῶν δὲ σαρκωδῶν μάλιστα φίλυρα. δοκεῖ δὲ καὶ θερμότατον εἶναι τοῦτο· σημεῖον δὲ ὅτι μάλιστα ἀμβλύνει τὰ σιδήρια· τὴν γὰρ βαφὴν ἀνίησι διὰ τὴν θερμότητα.

[4] Θερμὸν δὲ καὶ κιττὸς καὶ δάφνη καὶ ὅλως ἐξ ὧν τὰ πυρεῖα γίνεται· Μενέστωρ δὲ φησι καὶ συκάμινον. ψυχρότατα δὲ τὰ ἐνυδρα καὶ ὑδατώδη. καὶ γλίσχρα δὲ τὰ ἰτεῖνα καὶ ἀμπέλινα, δι' ὃ καὶ τὰς ἀσπίδας ἐκ τούτων ποιοῦσι· συμμύει γὰρ πληγέντα· κουφότερον δὲ τὸ τῆς ἰτέας, μανότερον γάρ, δι' ὃ καὶ τούτῳ μᾶλλον χρῶνται. τὸ δὲ τῆς πλατάνου γλίσχρότητα μὲν ἔχει, φύσει δὲ ὑγρότερον τοῦτο καὶ τὸ τῆς πετελέας. σημεῖον δὲ ἐστίν, μετὰ τὴν τομὴν ὀρθὸν ὅταν σταθῇ, πολὺ ὕδωρ ἀφίησι. τὸ δὲ τῆς συκαμίνου πυκνὸν ἅμα καὶ γλίσχρον.

[5] Ἔστι δὲ καὶ ἀστραβέστατον τὸ τῆς πετελέας, δι' ὃ καὶ τοὺς στροφεῖς τῶν θυρῶν ποιοῦσι πετελείνους· ἐὰν γὰρ οὗτοι μένωσι, καὶ αἱ θύραι μένουσιν ἀστραβεῖς, εἰ δὲ μὴ, διαστρέφονται. ποιοῦσι δ' αὐτοὺς ἔμπαλιν τιθέντες τὰ ξύλα τό τε ἀπὸ τῆς ῥίζης καὶ τὸ ἀπὸ τοῦ φύλλου· καλοῦσι δὲ οἱ τέκτονες τὸ ἀπὸ τοῦ φύλλου τὸ ἄνω· ἐναρμοσθέντα γὰρ ἀλλήλοις ἐκάτερον κωλύει πρὸς τὴν ὀρμὴν ἐναντίως ἔχον. εἰ δὲ ἔκειτο κατὰ φύσιν, οὐπὲρ ἡ ῥοπὴ ἐνταῦθα πάντων ἂν ἦν ἡ φορὰ.

Τὰς δὲ θύρας οὐκ εὐθὺς συντελοῦσιν, ἀλλὰ πῆξαντες ἐφιστᾶσι, κᾶπειτα ὑστέρω οἱ δὲ τῷ τρίτῳ ἔτει συνετέλεσαν ἐὰν μᾶλλον σπουδάζωσι· τοῦ μὲν γὰρ θέρους ἀναξηραινομένων διίστανται, τοῦ δὲ χειμῶνος συμμύουσιν. αἴτιον δ' ὅτι τῆς ἐλάτης τὰ μανὰ καὶ σαρκώδη ἔλκει τὸν ἀέρα ἐνικμον ὄντα.

[6] Ὁ δὲ φοῖνιξ κοῦφος καὶ εὐεργος καὶ μαλακός, ὥσπερ ὁ φελλός, βελτίων δὲ τοῦ φελλοῦ ὅτι γλίσχρος· ἐκεῖνο δὲ θραυστόν. διὰ τοῦτο τὰ εἶδωλα νῦν ἐκ τοῦ τῶν φοινίκων ποιοῦσι, τὸν δὲ φελλὸν παρήκασι. τὰς Ἴνας δὲ οὐ δι' ὅλου ἔχει οὐδ' ἐπὶ πολὺ καὶ μακρὰς οὐδ' ὥσαύτως τῇ θέσει ἐγκειμένας πάσας ἀλλὰ παντοδαπῶς. ἀναξηραίνεται δὲ καὶ λεαινόμενον καὶ πριόμενον τὸ ξύλον.

[7] Τὸ δὲ θύον, οἱ δὲ θύαν καλοῦσι, παρ' Ἀμμωνι τε γίνεται καὶ ἐν τῇ Κυρηναίᾳ, τὴν μὲν μορφήν ὁμοιον κυπαρίττῳ καὶ τοῖς κλάδοις καὶ τοῖς φύλλοις καὶ τῷ στελέχει καὶ τῷ καρπῷ, μᾶλλον δ' ὥσπερ κυπάριττος ἀγρία· πολὺ μὲν καὶ ὅπου νῦν ἡ πόλις ἐστί, καὶ ἔτι διαμνημονεύουσιν ὁροφάς τινας τῶν ἀρχαίων οὔσας. ἀσαπὲς γὰρ ὅλως τὸ ξύλον οὐλότατον δὲ τὴν ρίζαν ἐστί· καὶ ἐκ ταύτης τὰ σπουδαιότατα ποιεῖται τῶν ἔργων. τὰ δὲ ἀγάλματα γλύφουσιν ἐκ τῶνδε, κέδρων κυπαρίττου λωτοῦ πύξου· τὰ δ' ἐλάττω καὶ ἐκ τῶν ἐλαίνων ρίζων· ἀρραγεῖς γὰρ αὐταὶ καὶ ὁμαλῶς πως σαρκώδεις. ταῦτα μὲν οὖν ιδιότητά τινα τόπων καὶ φύσεως καὶ χρεῖας ἀποδηλοῖ.

[4.1] Βαρέα δὲ καὶ κοῦφα δηλὸν ὡς τῇ πυκνότητι καὶ μανότητι καὶ ὑγρότητι καὶ ξηρότητι καὶ τῷ γλοιώδει καὶ σκληρότητι καὶ μαλακότητι ληπτέον. ἔνια μὲν οὖν ἅμα σκληρὰ καὶ βαρέα, καθάπερ πύξος καὶ δρυς· ὅσα δὲ κραῦρα καὶ τῇ ξηρότητι σκληρότατα, ταῦτ' οὐκ ἔχει βάρος. ἅπαντα δὲ τὰ ἄγρια τῶν ἡμέρων καὶ τὰ ἄρρενα τῶν θηλειῶν πυκνότερά τε καὶ σκληρότερα καὶ βαρύτερα καὶ τὸ ὅλον ισχυρότερα, καθάπερ καὶ πρότερον εἵπομεν. ὡς δ' ἐπὶ τὸ πᾶν καὶ τὰ ἀκαρπότερα τῶν καρπίμων καὶ τὰ χεῖρω τῶν καλλικαρποτέρων· εἰ μή που καρπιμώτερον τὸ ἄρρεν, ὥσπερ ἄλλα τέ φασι καὶ τὴν κυπάριττον καὶ τὴν κρίνειαν. ἀλλὰ τῶν γε ἀμπέλων φανερώς αἱ ὀλιγοκαρπότεραι καὶ πυκνοφθαλμότεραι καὶ στερεώτεραι· καὶ μηλεῶν δὲ καὶ τῶν ἄλλων ἡμέρων.

[2] Ἀσαπὴ δὲ φύσει κυπάριττος κέδρος ἔβενος λωτὸς πύξος ἐλάα κότινος πεύκη ἑνδαδὸς ἀρία δρυς καρύα Εὐβοϊκῇ. τούτων δὲ χρονιώτατα δοκεῖ τὰ κυπαρίττινα εἶναι· τὰ γοῦν ἐν Ἐφέσῳ, ἐξ ὧν αἱ θύραι τοῦ νεωστὶ νεώ, τεθησαυρισμένα τέτταρας ἔκειτο γενεάς. μόνα δὲ καὶ στιλβηδόνα δέχεται, δι' ὃ καὶ τὰ σπουδαζόμενα τῶν ἔργων ἐκ τούτων ποιοῦσι. τῶν δὲ ἄλλων ἀσαπέστατον μετὰ τὰ κυπαρίττινα καὶ τὰ θυώδη τὴν συκάμινον εἶναί φασι, καὶ ισχυρὸν ἅμα καὶ εὖεργον τὸ ξύλον· γίνεται δὲ τὸ ξύλον [καὶ] παλαιούμενον μέλαν, ὥσπερ λωτός.

[3] Ἔτι δὲ ἄλλο πρὸς ἄλλο καὶ ἐν ἄλλῳ ἀσαπὲς, οἷον πετελέα μὲν ἐν τῷ ἀέρι, δρυς δὲ κατορυττομένη καὶ ἐν τῷ ὕδατι καταβρεχομένη· δοκεῖ γὰρ ὅλως ἀσαπὲς εἶναι· δι' ὃ καὶ εἰς τοὺς ποταμοὺς καὶ εἰς τὰς λίμνας ἐκ τούτων ναυπηγοῦσιν· ἐν δὲ τῇ θαλάττῃ σήπεται. τὰ δὲ ἄλλα διαμένει μᾶλλον, ὅπερ καὶ εὐλογον, ταριχευόμενα τῇ ἄλμῃ.

[4] Δοκεῖ δὲ καὶ ἡ ὀξὺη πρὸς τὸ ὕδωρ ἀσαπὴς εἶναι καὶ βελτίων γίνεσθαι βρεχομένη. καὶ ἡ καρύα δὲ ἡ Εὐβοϊκῇ ἀσαπὴς. φασι δὲ καὶ τὴν πεύκην ἐλάτης μᾶλλον ὑπὸ τερηδόνης ἐσθίεσθαι· τὴν μὲν γὰρ εἶναι ξηράν, τὴν δὲ πεύκην

ἔχειν γλυκύτητα, καὶ ὅσῳ ἐνδεδωτέρα, μᾶλλον· πάντα δ' ἐσθίεσθαι τερηδόνι πλὴν κοτίνου καὶ ἐλάας· τὰ δὲ οὐ, διὰ τὴν πικρότητα. ἐσθίεται δὲ τὰ μὲν ἐν τῇ θαλάττῃ σηπόμενα ὑπὸ τερηδόνης, τὰ δ' ἐν τῇ γῇ ὑπὸ σκωλήκων καὶ ὑπὸ θριπῶν· οὐ γὰρ γίνεται τερηδὼν ἀλλ' ἢ ἐν τῇ θαλάττῃ. ἔστι δὲ ἡ τερηδὼν τῷ μὲν μεγέθει μικρόν, κεφαλὴν δ' ἔχει [5] μεγάλην καὶ ὀδόντας· οἱ δὲ θρίπες ὅμοιοι τοῖς σκώληξιν, ὅν' ὦν τιτραίνεται κατὰ μικρὸν τὰ ξύλα. καὶ ἔστι ταῦτα εὐΐατα· πιττοκοπηθέντα γὰρ ὅταν εἰς τὴν θάλατταν ἐλκυσθῇ στέγει· τὰ δὲ ὑπὸ τῶν τερηδόνων ἀνίατα. τῶν δὲ σκωλήκων τῶν ἐν τοῖς ξύλοις οἱ μὲν εἰσιν ἐκ τῆς οἰκείας σήψεως, οἱ δ' ἐντικτόντων ἐτέρων· ἐντίκτει γάρ, ὥσπερ καὶ τοῖς δένδροις, ὁ κεράστης καλούμενος, ὅταν τιτράνῃ καὶ κοιλάνῃ περιστραφεὶς ὥσπερ εἰ μυοδόχον. φεύγει δὲ τὰ τε ὀσμώδη καὶ πικρὰ καὶ σκληρὰ διὰ τὸ μὴ δύνασθαι τιτράναι, καθάπερ [6] τὴν πύξον. φασὶ δὲ καὶ τὴν ἐλάτην φλοῖσθεῖσαν ὑπὸ τὴν βλάστησιν ἀσαπῇ διαμένειν ἐν τῷ ὕδατι· φανερόν δὲ γενέσθαι ἐν Φενεῷ τῆς Ἀρκαδίας, ὅτε αὐτοῖς ἐλιμνώθη τὸ πεδίον φραχθέντος τοῦ βερέθρου· τότε γὰρ τὰς γεφύρας ποιοῦντες ἐλατίνας καί, ὅταν ἐπαναβαίνῃ τὸ ὕδωρ, ἄλλην καὶ ἄλλην ἐφιστάντες, ὡς ἐρράγῃ καὶ ἀπῆλθε, πάντα εὑρεθῆναι τὰ ξύλα ἀσαπῇ. τοῦτο μὲν οὖν ἐκ συμπτώματος.

[7] Ἐν Τύλῳ δὲ τῇ νήσῳ τῇ περὶ τὴν Ἀραβίαν εἶναι τί φασὶ ξύλον ἐξ οὗ τὰ πλοῖα ναυπηγοῦνται· τοῦτο δὲ ἐν μὲν τῇ θαλάττῃ σχεδὸν ἄσηπτον εἶναι· διαμένει γὰρ ἔτι πλείω ἢ διακόσια καταβυθιζόμενον· ἐὰν δὲ ἔξω, χρόνιον μὲν θάπτον δὲ σήπεται. (θαυμαστὸν δὲ καὶ ἕτερον λέγουσι, οὐδὲν δὲ πρὸς τὴν σῆψιν. εἶναι γάρ τι δένδρον ἐξ οὗ τὰς βακτηρίας τέμνεσθαι, καὶ γίνεσθαι καλὰς σφόδρα ποικιλίαν τινὰ ἐχούσας ὁμοίαν τῷ τοῦ τίγριος δέρματι· βαρὺ δὲ σφόδρα τὸ ξύλον τοῦτο· ὅταν δὲ τις ρίψῃ πρὸς στερεώτερον τόπον, κατάγνυσθαι καθάπερ τὰ κεράμια.)

[8] Καὶ τὸ τῆς μυρίκης δὲ ξύλον οὐχ ὥσπερ ἐνταῦθα ἀσθενές, ἀλλ' ἰσχυρόν ὥσπερ πρίνινον ἢ καὶ ἄλλο τι τῶν ἰσχυρῶν. τοῦτο μὲν οὖν ἅμα μηνύει χώρας τε καὶ ἀέρος διαφορὰς καὶ δυνάμεις. τῶν δὲ ὁμογενῶν ξύλων, οἷον δρυίνων πευκίνων, ὅταν ταριχεύονται - ταριχεύουσι γὰρ οὐκ ἐν ἴσῳ βάθει πάντα δύοντες τῆς θαλάττης, ἀλλὰ τὰ μὲν πρὸς αὐτῇ τῇ γῇ, τὰ δὲ μικρὸν ἀνωτέρω, τὰ δ' ἐν πλείονι βάθει· πάντων δὲ τὰ πρὸς τὴν ρίζαν θάπτον δύεται καθ' ὕδατος, κἂν ἐπινῇ μᾶλλον ῥέπει κάτω.

[5.1] Ἔστι δὲ τὰ μὲν εὐεργα τῶν ξύλων, τὰ δὲ δύσεργα· εὐεργα μὲν τὰ μαλακά, καὶ πάντων μάλιστα φίλυρα· δύσεργα δὲ καὶ τὰ σκληρὰ καὶ τὰ ὀζώδη καὶ οὐλας ἔχοντα συστροφάς· δυσεργότατα δὲ ἀρία καὶ δρυς, ὡς δὲ κατὰ

μέρος ὁ τῆς πεύκης ὄζος καὶ τῆς ἐλάτης. αἰεὶ δὲ τῶν ὁμογενῶν τὸ μαλακώτερον τοῦ σκληροτέρου κρεῖττον· σαρκωδέστερον γάρ· καὶ εὐθὺ σκοποῦνται τὰς σανίδας οἱ τέκτονες οὕτως. τὰ δὲ μοχθηρὰ σιδήρια δύναται τέμνειν τὰ σκληρὰ μᾶλλον τῶν μαλακῶν· ἀνίησι γὰρ ἐν τοῖς μαλακοῖς, ὥσπερ ἐλέγχθη περὶ τῆς φιλύρας, παρακονᾷ δὲ μάλιστα τὰ σκληρὰ· δι' ὃ καὶ οἱ σκυτοτόμοι ποιοῦνται τοὺς πίνακας ἀχράδους.

[2] Μήτηραν δὲ πάντα μὲν ἔχειν φασὶν οἱ τέκτονες φανεράν δ' εἶναι μάλιστα ἐν τῇ ἐλάτῃ· φαίνεσθαι γὰρ οἶον φλοιώδη τινὰ τὴν σύνθεσιν αὐτῆς τῶν κύκλων. ἐν ἐλάᾳ δὲ καὶ πύξῳ καὶ τοῖς τοιούτοις οὐχ ὁμοίως· δι' ὃ καὶ οὐ φασὶν τινες ἔχειν τῇ δυνάμει πύξον καὶ ἐλάαν· ἥκιστα γὰρ ἔλκεσθαι ταῦτα τῶν ξύλων. ἔστι δὲ τὸ ἔλκεσθαι τὸ συμπεριίστασθαι κινουμένης τῆς μήτρας. ζῆ γὰρ ὡς ἔοικεν ἐπὶ χρόνον πολύν· δι' ὃ πανταχόθεν μὲν ἅμα μάλιστα δ' ἐκ τῶν θυρωμάτων ἐξαιρουῖσιν, ὅπως ἀστραβῇ ἢ καὶ διὰ τοῦτο σχίζουσιν.

[3] Ἄτοπον δ' ἂν δόξειεν ὅτι ἐν μὲν τοῖς ξύλοις τοῖς στρογγύλοις ἄλυπος ἡ μήτρα καὶ ἀκίνητος, ἐν δὲ τοῖς παρακινήθεισιν, ἐὰν μὴ ὅλως ἐξαιρεθῇ, κινεῖ καὶ παραστρέφει· μᾶλλον γὰρ εἰκὸς γυμνωθεῖσαν ἀποθνήσκειν. ὅμως δὲ οἱ γε ἱστοὶ καὶ αἱ κεραῖαι ἐξαιρεθείσης ἀχρεῖοι. τοῦτο δὲ κατὰ συμβεβηκός, ὅτι χιτῶνας ἔχει πλείους, ἰσχυρότατον δὲ καὶ λεπτότατον δὲ τὸν ἔσχατον, ξηρότατον γάρ, καὶ τοὺς ἄλλους ἀνὰ λόγον. ὅταν οὖν [4] σχισθῇ, περιαιρεῖται τὰ ξηρότατα. εἰ δ' ἡ μήτρα διὰ τὸ ξηρὸν σκεπτέον. διαστρέφει δὲ ἐλκομένη τὰ ξύλα καὶ ἐν τοῖς σχιστοῖς καὶ πριστοῖς, ὅταν μὴ ὡς δεῖ πρίωσι· δεῖ γὰρ ὀρθὴν τὴν πρίσιν εἶναι καὶ μὴ πλαγίαν. οἶον οὖσης τῆς μήτρας ἐφ' ἣν τὸ α, μὴ παρὰ τὴν βγ τέμνειν, ἀλλὰ παρὰ τὴν βδ. φθείρεσθαι γὰρ οὕτω φασίν, ἐκείνως δὲ ζῆν. ὅτι δὲ πᾶν ξύλον ἔχει μήτραν ἐκ τούτων οἶονται· φανερόν γάρ ἐστι καὶ τὰ μὴ δοκοῦντα πάντ' ἔχειν, οἶον πύξον λωτὸν πρῖνον. σημεῖον δέ· τοὺς γὰρ στροφιγγας τῶν θυρῶν τῶν πολυτελῶν ποιοῦσι μὲν ἐκ τούτων, συγγράφονται δὲ οἱ ἀρχιτέκτονες οὕτως <μῇ> ἐκ μήτρας. ταῦτό δὲ τοῦτο σημεῖον καὶ ὅτι πᾶσα μήτρα ἔλκεται, καὶ αἱ τῶν σκληροτάτων, [5] ἅς δὴ τινες καρδίας καλοῦσι. παντὸς δὲ ὡς εἶπεν ξύλου σκληροτάτη καὶ μανοτάτη ἡ μήτρα, καὶ αὐτῆς τῆς ἐλάτης· μανοτάτη μὲν οὖν, ὅτι τὰς ἵνας ἔχει καὶ διὰ πολλοῦ καὶ τὸ σαρκῶδες τὸ ἀνὰ μέσον πολὺ· σκληροτάτη δέ, ὅτι καὶ αἱ ἵνες σκληρόταται καὶ τὸ σαρκῶδες· δι' ὃ καὶ οἱ ἀρχιτέκτονες συγγράφονται παραιρεῖν τὰ πρὸς τὴν μήτραν, ὅπως λάβωσι τοῦ ξύλου τὸ πυκνότεον καὶ μαλακώτατον.

[6] Τῶν δὲ ξύλων τὰ μὲν σχιστὰ τὰ δὲ πελεκητὰ τὰ δὲ στρογγύλα· σχιστὰ μὲν, ὅσα διαιροῦντες κατὰ τὸ μέσον πρίζουσι· πελεκητὰ δέ, ὅσων

ἀποπελεκῶσι τὰ ἔξω· στρογγύλα δὲ δῆλον ὅτι τὰ ὅλως ἄγανυστα. τούτων δὲ τὰ σχιστὰ μὲν ὅλως ἀρραγῇ διὰ τὸ γυμνωθεῖσαν τὴν μήτραν ξηραίνεσθαι καὶ ἀποθνήσκειν· τὰ δὲ πελεκητὰ καὶ τὰ στρογγύλα ρήγνυνται· μᾶλλον δὲ πολὺ τὰ στρογγύλα διὰ τὸ ἐναπειληφθαι τὴν μήτραν· οὐδὲν γὰρ ὅτι τῶν ἀπάντων οὐ ρήγνυνται. τοῖς δὲ λωτίνοις καὶ τοῖς ἄλλοις οἷς εἰς τοὺς στρόφιγγας χρῶνται πρὸς τὸ μὴ ρήγνυσθαι βόλβιτον περιπλάττουσιν, ὅπως ἀναξηρανθῇ καὶ διαπνευσθῇ κατὰ μικρὸν ἢ ἐκ τῆς μήτρας ὑγρότης. ἢ μὲν οὖν μήτρα τοιαύτην ἔχει δύναμιν.

[6.1] Βάρος δὲ ἐνεγκεῖν ἰσχυρὰ καὶ ἡ ἐλάτη καὶ ἡ πεύκη πλάγαι τιθέμεναι· οὐδὲν γὰρ ἐνδιδόασιν, ὥσπερ ἡ δρυς καὶ τὰ γεῶδη, ἀλλ' ἀντωθοῦσι· σημεῖον δὲ ὅτι οὐδέποτε ρήγνυνται, καθάπερ ἐλάα καὶ δρυς, ἀλλὰ πρότερον σήπονται καὶ ἄλλως ἀπαυδῶσιν. ἰσχυρὸν δὲ καὶ ὁ φοῖνιξ· ἀνάπαλιν γὰρ ἡ κάμψις ἢ τοῖς ἄλλοις γίνεται· τὰ μὲν γὰρ εἰς τὰ κάτω κάμπτεται, ὁ δὲ φοῖνιξ εἰς τὰ ἄνω. φασὶ δὲ καὶ τὴν πεύκην καὶ τὴν ἐλάτην ἀντωθεῖν. τὸ δὲ τῆς Εὐβοϊκῆς καρύας, γίνεται γὰρ μέγα καὶ χρῶνται πρὸς τὴν ἔρεψιν, ὅταν μέλλῃ ρήγνυσθαι ψοφεῖν ὥστε προαισθάνεσθαι πρότερον· ὅπερ καὶ ἐν Ἀντάνδρῳ συνέπεσεν ἐν τῷ βαλανείῳ καὶ πάντες ἐξεπήδησαν. ἰσχυρὸν δὲ καὶ τὸ τῆς συκῆς πλὴν εἰς ὀρθόν.

[2] Ἡ δὲ ἐλάτη μάλιστα ὡς εἰπεῖν ἰσχυρόν. πρὸς δὲ τὰς τῶν τεκτόνων χρεῖας ἐχέκολλον μὲν μάλιστα ἡ πεύκη διὰ τε τὴν μανότητα καὶ τὴν εὐθυπορίαν· οὐδὲ γὰρ ὅλως οὐδὲ ρήγνυσθαι φασιν ἐὰν κολληθῇ. εὐτορνότατον δὲ φίλυρα, καὶ ἡ λευκότης ὥσπερ ἡ τοῦ κηλάστρου. τῶν δὲ ἄλλων ἡ φίλυρα· τὸ γὰρ ὅλον εὖεργον, ὥσπερ ἐλέχθη, διὰ μαλακότητα. εὐκαμπτα δὲ ὡς μὲν ἀπλῶς εἰπεῖν ὅσα γλίσχρα. διαφέρειν δὲ δοκεῖ συκάμινος καὶ ἐρινεός, δι' ὃ καὶ τὰ ἱκρια καὶ τὰς στεφάνας καὶ ὅλως ὅσα περὶ τὸν κόσμον ἐκ τούτων ποιοῦσι.

[3] Εὐπριστα δὲ καὶ εὐσχιστα τὰ ἐνικμότερα τῶν πάμπαν ξηρῶν· τὰ μὲν γὰρ παύονται, τὰ δὲ ἴστανται· τὰ δὲ χλωρὰ λίαν συμμύει καὶ ἐνέχεται ἐν τοῖς ὁδοῦσι τὰ πρίσματα καὶ ἐμπλάττει, δι' ὃ καὶ παραλλάττουσιν ἀλλήλων τοὺς ὁδόντας ἵνα ἐξάγῃται. ἔστι δὲ καὶ δυστρυπητότερα τὰ λίαν χλωρὰ· βραδέως γὰρ ἀναφέρεται τὰ ἐκτρυπήματα διὰ τὸ βαρέα εἶναι· τῶν δὲ ξηρῶν ταχέως καὶ εὐθὺς ὁ ἀῆρ ἀναθερμαινόμενος ἀναδίδωσι· πάλιν δὲ τὰ λίαν ξηρὰ διὰ τὴν σκληρότητα δύσπριστα· καθάπερ γὰρ ὄστρακον συμβαίνει πρίειν, δι' ὃ καὶ τρυπῶντες ἐπιβρέχουσιν.

[4] Εὐπελεκητότερα δὲ καὶ εὐτορνότερα καὶ εὐξοώτερα τὰ χλωρὰ· προσκάθηταί τε γὰρ τὸ τορνευτήριον μᾶλλον καὶ οὐκ ἀποπηδᾷ. καὶ ἡ

πελέκησις τῶν μαλακωτέρων ῥάων, καὶ ἡ ξέσις δὲ ὁμοίως καὶ ἔτι λειοτέρα. ἰσχυρότατον δὲ καὶ ἡ κράνεια, τῶν δὲ ἄλλων οὐχ ἥκιστα ἡ πελέα, δι' ὃ καὶ τοὺς στροφέας, ὥσπερ ἐλέχθη, ταῖς θύραις πετεΐνους ποιοῦσιν. ὑγρότατον δὲ μελία καὶ ὀξύη· καὶ γὰρ τὰ κλινάρια τὰ ἐνδιδόντα ἐκ τούτων.

[7.1] Ὅλως δὲ πρὸς ποῖα τῆς ὕλης ἐκάστη χρησίμη καὶ ποία ναυπηγήσιμος καὶ οἰκοδομική, πλείστη γὰρ αὕτη ἡ χρεία καὶ ἐν μεγίστοις, πειρατέον εἰπεῖν, ἀφορίζοντα καθ' ἕκαστον τὸ χρήσιμον.

Ἐλάτη μὲν οὖν καὶ πεύκη καὶ κέδρος ὡς ἀπλῶς εἰπεῖν ναυπηγήσιμα· τὰς μὲν γὰρ τριήρεις καὶ τὰ μακρὰ πλοῖα ἐλάτινα ποιοῦσι διὰ κουφότητα, τὰ δὲ στρογγύλα πεύκινα διὰ τὸ ἀσαπές· ἔνιοι δὲ καὶ τὰς τριήρεις διὰ τὸ μὴ εὐπορεῖν ἐλάτης. οἱ δὲ κατὰ Συρίαν καὶ Φοινίκην ἐκ κέδρου· σπανίζουσι γὰρ καὶ πεύκης. οἱ δ' ἐν Κύπρῳ πίτυος· ταύτην γὰρ ἡ νῆσος ἔχει καὶ δοκεῖ κρείττων εἶναι τῆς [2] πεύκης. καὶ τὰ μὲν ἄλλα ἐκ τούτων· τὴν δὲ τρόπιν τριήρει μὲν δρυΐνην, ἵνα ἀντέχη πρὸς τὰς νεωλκίας, ταῖς δὲ ὀλκάσι πευκίνην· ὑποτιθέασι δ' ἔτι καὶ δρυΐνην ἐπὶ νεωλκῶσι, ταῖς δ' ἐλάττοσιν ὀξύϊνην· καὶ ὅλως ἐκ τούτου τὸ χέλυσμα.

Οὐχ ἅπτεται δὲ οὐδὲ κατὰ τὴν κόλλησιν ὁμοίως τὸ δρυΐνον τῶν πευκίνων καὶ ἐλατίνων· τὰ μὲν γὰρ πυκνὰ τὰ δὲ μανά, καὶ τὰ μὲν ὅμοια τὰ δ' οὐ. δεῖ δὲ ὁμοιοπαθῆ εἶναι τὰ μέλλοντα συμφύεσθαι καὶ μὴ ἐναντία, καθαπερανεὶ λίθον καὶ ξύλον.

[3] Ἡ δὲ τορνεία τοῖς μὲν πλοίοις γίνεται συκαμίνου μελίας πετελάς πλατάνου· γλίσχρότητα γὰρ ἔχειν δεῖ καὶ ἰσχύον. χειρίστη δὲ ἡ τῆς πλατάνου· ταχὺ γὰρ σήπεται. ταῖς δὲ τριήρεσιν ἔνιοι καὶ πιτυίνας ποιοῦσι διὰ τὸ ἐλαφρόν. τὸ δὲ στερέωμα, πρὸς ᾧ τὸ χέλυσμα, καὶ τὰς ἐπωτίδας, μελίας καὶ συκαμίνου καὶ πετελάς· ἰσχυρὰ γὰρ δεῖ ταῦτ' εἶναι. ναυπηγήσιμος μὲν οὖν ὕλη σχεδὸν αὕτη.

[4] Οἰκοδομική δὲ πολλῶν πλείων, ἐλάτη τε καὶ πεύκη καὶ κέδρος, ἔτι κυπάριττος δρυῖς καὶ ἄρκευθος· ὡς δ' ἀπλῶς εἰπεῖν πᾶσα χρησίμη πλὴν εἴ τις ἀσθενὴς πάμπαν· οὐκ εἰς ταὐτὸ γὰρ πᾶσαι, καθάπερ οὐδ' ἐπὶ τῆς ναυπηγίας. αἱ δ' ἄλλαι πρὸς τὰ ἴδια τῶν τεχνῶν, οἷον σκεύη καὶ ὄργανα καὶ εἴ τι τοιούτων ἕτερον. πρὸς πλείστα δὲ σχεδὸν ἡ ἐλάτη παρέχεται χρεῖαν· καὶ γὰρ πρὸς τοὺς πίνακας τοὺς γραφομένους. τεκτονικῇ μὲν οὖν ἡ παλαιοτάτη κρατίστη, ἐὰν ἢ ἀσαπής· εὐθετεῖ γὰρ ὡς εἰπεῖν πᾶσι χρῆσθαι· ναυπηγικῇ δὲ διὰ τὴν κάμψιν ἐνικμοτέρα ἀναγκαῖον· ἐπεὶ πρὸς γε τὴν κόλλησιν ἡ ξηροτέρα συμφέρει. ἴσταται γὰρ καινὰ τὰ ναυπηγούμενα καὶ ὅταν συμπαγῇ καθελκυσθέντα

συμμύει καὶ στέγει, πλὴν ἐὰν μὴ παντάπασιν ἐξικμασθῇ· τότε δὲ οὐ δέχεται κόλλησιν ἢ οὐχ ὁμοίως.

[5] Δεῖ δὲ καὶ καθ' ἕκαστον λαμβάνειν εἰς ποῖα χρήσιμός ἐστιν. ἐλάτη μὲν οὖν καὶ πεύκη, καθάπερ εἴρηται, καὶ πρὸς ναυπηγίαν καὶ πρὸς οἰκοδομίαν καὶ ἔτι πρὸς ἄλλα τῶν ἔργων, εἰς πλείω δὲ ἢ ἐλάτη. πίτυϊ δὲ χρῶνται μὲν εἰς ἄμφω καὶ οὐχ ἥττον εἰς ναυπηγίαν, οὐ μὴν ἀλλὰ ταχὺ διασῆπεται. δρυὶς δὲ πρὸς οἰκοδομίαν καὶ πρὸς ναυπηγίαν ἔτι τε πρὸς τὰ κατὰ γῆς κατορυττόμενα. φύλυρα δὲ πρὸς τὰ σανιδώματα τῶν μακρῶν πλοίων καὶ πρὸς κιβώτια καὶ πρὸς τὴν τῶν μέτρων κατασκευήν. ἔχει δὲ καὶ τὸν φλοιὸν χρήσιμον πρὸς τε τὰ σχοινία καὶ πρὸς τὰς κίστας· ποιοῦσι γὰρ ἐξ αὐτῆς.

[6] Σφένδαμνός τε καὶ ζυγία πρὸς κλινοπηγίαν καὶ πρὸς τὰ ζυγὰ τῶν λοφούρων. μίλος δὲ εἰς παρακολληήματα κιβώτοις καὶ ὑποβάθοις καὶ ὅλως τοῖς τοιούτοις. πρίνος δὲ πρὸς ἄξονας ταῖς μονοστρόφοις ἀμάξαις καὶ εἰς ζυγὰ λύραις καὶ ψαλτηρίοις. ὀξύη δὲ πρὸς ἀμαξοπηγίαν καὶ διφροπηγίαν τὴν εὐτελεῇ. πετελέα δὲ πρὸς θυροπηγίαν καὶ γαλεάγρας· χρῶνται δὲ καὶ εἰς τὰ ἀμαξικὰ μετρίως. πηδός δὲ εἰς ἄξονάς τε ταῖς ἀμάξαις καὶ εἰς ἔλκηθρα τοῖς ἄρότροις. ἀνδράχλη δὲ ταῖς γυναιξίν εἰς τὰ περὶ τοὺς ἰστούς. ἄρκευθος δὲ εἰς τεκτονίας καὶ εἰς τὰ ὑπαίθρια καὶ εἰς τὰ κατορυττόμενα κατὰ γῆς διὰ τὸ ἀσαπές.

[7] ὠσαύτως δὲ καὶ ἡ Εὐβοϊκὴ καρύα, καὶ πρὸς γε τὴν κατόρυξιν ἔτι μᾶλλον ἀσαπῆς. πύξω δὲ χρῶνται μὲν πρὸς ἔνια, οὐ μὴν ἀλλ' ἢ γε ἐν τῷ Ὀλύμπῳ γινομένη διὰ τὸ βραχεῖά τε εἶναι καὶ ὀζώδης ἀχρεῖος. τερμίνθω δὲ οὐδὲν χρῶνται πλὴν τῷ καρπῷ καὶ τῇ ῥητίνῃ. οὐδὲ φιλύκη πλὴν τοῖς προβάτοις· αἰεὶ γάρ ἐστι δασεῖα. τῇ δὲ ἀφάρκῃ εἰς χάρακάς τε καὶ τὸ καίειν. κηλάστρω δὲ καὶ σημύδα πρὸς βακτηρίας. ἔνιοι δὲ καὶ δάφνη· τὰς γὰρ γεροντικὰς καὶ κούφας ταύτης ποιοῦσιν. ἰτέα δὲ πρὸς τε τὰς ἀσπίδας καὶ τὰς κίστας καὶ τὰ κανᾶ καὶ τᾶλλα. προσαναλαβεῖν δὲ ἐστὶ καὶ τῶν ἄλλων ἕκαστον ὁμοίως.

[8] Διήρηται δὲ καὶ πρὸς τὰ τεκτονικὰ τῶν ὀργάνων ἕκαστα κατὰ τὴν χρεῖαν· οἷον σφυρίον μὲν καὶ τερέτριον ἄριστα μὲν γίνεται κοτίνου· χρῶνται δὲ καὶ πυξίνοις καὶ πετελείνοις καὶ μελείνοις· τὰς δὲ μεγάλας σφύρας πιτυΐνας ποιοῦσιν. ὁμοίως δὲ καὶ τῶν ἄλλων ἕκαστον ἔχει τινὰ τάξιν. καὶ ταῦτα μὲν αἰ χρεῖαι διαيروῦσιν.

[8.1] Ἐκάστη δὲ τῆς ὕλης, ὥσπερ καὶ πρότερον ἐλέχθη, διαφέρει κατὰ τοὺς τόπους· ἔνθα μὲν γὰρ λωτὸς ἔνθα δὲ κέδρος γίνεται θαυμαστή, καθάπερ καὶ περὶ Συρίαν· ἐν Συρίᾳ γὰρ ἐν τε τοῖς ὄρεσι διαφέροντα γίνεται τὰ δένδρα τῆς

κέδρου καὶ τῷ ὕψει καὶ τῷ πάχει· τηλικαῦτα γὰρ ἐστὶν ὥστ' ἓνια μὲν μὴ δύνασθαι τρεῖς ἄνδρας περιλαμβάνειν· ἔν τε τοῖς παραδείσοις ἔτι μεῖζω καὶ καλλίω. φαίνεται δὲ καὶ ἐάν τις ἐᾷ καὶ μὴ τέμνη τόπον οἰκεῖον ἕκαστον ἔχον γίνεσθαι θαυμαστὸν τῷ μήκει καὶ πάχει. ἐν Κύρῳ γοῦν οὐκ ἔτεμον οἱ βασιλεῖς, ἅμα μὲν τηροῦντες καὶ ταμιευόμενοι, ἅμα δὲ καὶ διὰ τὸ δυσκόμιστον εἶναι. μῆκος μὲν ἦν τῶν εἰς τὴν ἐνδεκῆρην τὴν Δημητρίου τμηθέντων τρισκαίδεκαὸργιον, αὐτὰ δὲ τὰ ξύλα τῷ μήκει θαυμαστὰ καὶ ἄοζα καὶ λεῖα. μέγιστα δὲ καὶ παρὰ πολὺ τὰ ἐν τῇ Κύρνῳ φασὶν εἶναι· τῶν γὰρ ἐν τῇ Λατίνῃ καλῶν γινομένων ὑπερβολῇ καὶ τῶν ἐλατίνων καὶ τῶν πευκίνων - μεῖζω γὰρ ταῦτα καὶ καλλίω τῶν Ἰταλικῶν - οὐδὲν εἶναι [2] πρὸς τὰ ἐν τῇ Κύρνῳ. πλεῦσαι γὰρ ποτε τοὺς Ῥωμαίους βουλομένους κατασκευάσασθαι πόλιν ἐν τῇ νήσῳ πέντε καὶ εἴκοσι ναυσί, καὶ τηλικούτον εἶναι τὸ μέγεθος τῶν δένδρων ὥστε εἰσπλέοντας εἰς κόλπους τινὰς καὶ λιμένας διασχισθεῖσι τοῖς ἱστοῖς ἐπικινδυνεῦσαι. καὶ ὅλως δὲ πᾶσαν τὴν νῆσον δασεῖαν καὶ ὥσπερ ἡγριωμένην τῇ ὕλῃ· δι' ὃ καὶ ἀποστῆναι τὴν πόλιν οἰκίζειν· διαβάνας δὲ τινὰς ἀποτεμέσθαι πάμπολυ πλῆθος ἐκ τόπου βραχέος, ὥστε τηλικαύτην ποιῆσαι σχεδίαν ἢ ἐχρήσατο πεντήκοντα ἱστίοις· οὐ μὴν ἀλλὰ διαπεσεῖν αὐτὴν ἐν τῷ πελάγει. Κύρνος μὲν οὖν εἴτε διὰ τὴν ἄνεσιν εἴτε καὶ τὸ ἔδαφος καὶ τὸν ἀέρα πολὺ διαφέρει τῶν ἄλλων.

[3] Ἡ δὲ τῶν Λατίνων ἔφυδρος πᾶσα· καὶ ἡ μὲν πεδεινὴ δάφνην ἔχει καὶ μυρρίνους καὶ ὀξύην θαυμαστήν· τηλικαῦτα γὰρ τὰ μήκη τέμνουσι ὥστ' εἶναι διανεκῶς τῶν Τυρρηγίδων ὑπὸ τὴν τρόπιν· ἡ δὲ ὀρεινὴ πεύκην καὶ ἐλάτην. τὸ δὲ Κιρκαῖον καλούμενον εἶναι μὲν ἄκραν ὑψηλὴν, δασεῖαν δὲ σφόδρα καὶ ἔχειν δρῦν καὶ δάφνην πολλὴν καὶ μυρρίνους. λέγειν δὲ τοὺς ἐγχωρίους ὡς ἐνταῦθα ἡ Κίρκη κατῴκει καὶ δεικνύναι τὸν τοῦ Ἑλπήνορος τάφον, ἐξ οὗ φύονται μυρρίναι καθάπερ αἱ στεφανώτιδες τῶν ἄλλων ὄντων μεγάλων μυρρίνων. τὸν δὲ τόπον εἶναι καὶ τοῦτον νέαν πρόσθεσιν, καὶ πρότερον μὲν οὖν νῆσον εἶναι τὸ Κιρκαῖον, νῦν δὲ ὑπὸ ποταμῶν τινων προσκεχῶσθαι καὶ εἶναι ἡῖόνα. τῆς δὲ νήσου τὸ μέγεθος περὶ ὀγδοήκοντα σταδίου. καὶ τὰ μὲν τῶν τόπων ἴδια πολλὴν ἔχει διαφοράν, ὥσπερ εἴρηται πολλάκις.

[9.1] Τὸ δὲ καὶ πρὸς τὴν πύρωσιν πῶς ἐκάστη τῆς ὕλης ἔχει λεκτέον ὁμοίως καὶ πειρατέον λαβεῖν. ἄνθρακες μὲν οὖν ἄριστοι γίνονται τῶν πυκνοτάτων, οἷον ἀρίας δρυὸς κομάρου· στερεώτατοι γὰρ, ὥστε πλεῖστον χρόνον ἀντέχουσι καὶ μάλιστα ἰσχύουσι· δι' ὃ καὶ ἐν τοῖς ἀργυρείοις τούτοις χρῶνται πρὸς τὴν πρώτην τούτων ἔψησιν. χεῖριστοι δὲ τούτων οἱ δρύϊνοι· γεωδέστατοι

γάρ· χείρους δὲ καὶ οἱ τῶν πρεσβυτέρων τῶν νέων, καὶ μάλιστα οἱ τῶν γερανδρύων διὰ ταῦτό· ξηρότατοι γάρ, δι' ὃ καὶ πηδῶσι καιόμενοι· δεῖ δὲ ἔνικμον εἶναι.

[2] Βέλτιστοι δὲ οἱ τῶν ἐν ἀκμῇ καὶ μάλιστα οἱ τῶν κολοβῶν· συμμετρῶς γάρ ἔχουσι τῷ πυκνῷ καὶ γεῶδει καὶ τῷ ὑγρῷ· βελτίους δὲ καὶ ἐκ τῶν εὐεῖλων καὶ ξηρῶν καὶ προσβόρρων ἢ ἐκ τῶν παλισκίων καὶ ὑγρῶν καὶ πρὸς νότον· καὶ εἰ ἐνικμοτέρας ὕλης, πυκνῆς· ὑγροτέρα γὰρ ἢ πυκνῇ. καὶ ὅλως, ὅσα ἢ φύσει ἢ διὰ [τὸν] τόπον ξηρότερον πυκνότερα, ἐξ ἀπάντων βελτίω διὰ τὴν αὐτὴν αἰτίαν. χρεῖα δὲ ἄλλων ἄλλη· πρὸς ἓνια γὰρ ζητοῦσι τοὺς μαλακοὺς, οἷον ἐν τοῖς σιδηρείοις τοὺς τῆς καρύας τῆς Εὐβοϊκῆς, ὅταν ἤδη κεκαυμένους ᾖ, καὶ ἐν τοῖς ἀργυρείοις τοὺς πιτυίνους.

[3] χρῶνται δὲ καὶ αἱ τέχναι τούτοις. ζητοῦσι δὲ καὶ οἱ χαλκεῖς τοὺς πευκίνους μᾶλλον ἢ δρυίνους· καίτοι ἀσθενέστεροι ἄλλ' εἰς τὴν φύσησιν ἀμείνους ὥς ἥσσον καταμαραϊνόμενοι· ἔστι δὲ ἡ φλόξ ὀξυτέρα τούτων. τὸ δὲ ὅλον ὀξυτέρα φλόξ καὶ ἡ τούτων καὶ ἡ τῶν ξύλων τῶν μανῶν καὶ κούφων καὶ ἡ τῶν αὖων· ἡ δ' ἐκ τῶν πυκνῶν καὶ χλωρῶν νωθεστέρα καὶ παχυτέρα· πασῶν δὲ ὀξυτάτη ἡ ἐκ τῶν ὑλημάτων· ἄνθρακες δὲ ὅλως οὐ γίνονται διὰ τὸ μὴ ἔχειν τὸ σωματῶδες.

[4] Τέμνουσι δὲ καὶ ζητοῦσι εἰς τὰς ἀνθρακιάς τὰ εὐθέα καὶ τὰ λεῖα· δεῖ γὰρ ὥς πυκνότατα συνθεῖναι πρὸς τὴν κατάπνιξιν. ὅταν δὲ περιαλείψωσι τὴν κάμινον, ἐξάπτουσι παρὰ μέρος παρακεντοῦντες ὀβελίσκοις. εἰς μὲν τὴν ἀνθρακιὰν τὰ τοιαῦτα ζητοῦσι.

Δύσκαπνα δὲ τῷ γένει μὲν ὅλως τὰ ὑγρά· καὶ τὰ χλωρὰ διὰ τοῦτο δύσκαπνα. λέγω δὲ τὰ ὑγρά τὰ ἔλεια, οἷον πλάτανον ἰτέαν λεύκην αἵγειρον· ἐπεὶ καὶ ἡ ἄμπελος ὅτε ὑγρά δύσκαπνος. ἐκ δὲ τῆς ἰδίας φύσεως ὁ φοῖνιξ, ὃν δὴ καὶ μάλιστα τινες ὑπειλήφασιν δύσκαπνον· ὅθεν καὶ Χαιρήμων ἐποίησε “τοῦ τε δυσκαπνοτάτου φοῖνικος ἐκ γῆς [5] ῥίζοφοιτήτους φλέβας.” δριμύτατος δὲ ὁ καπνὸς συκῆς καὶ ἐρινεοῦ καὶ εἴ τι ἄλλο ὁπῶδες· αἰτία δὲ ἡ ὑγρότης· φλοῖσθέντα δὲ καὶ ἀποβρεχθέντα ἐν ὕδατι ἐπιρρύνω καὶ μετὰ ταῦτα ξηρανθέντα πάντων ἀκαπνότατα καὶ φλόγα μαλακωτάτην ἀνίησιν, ἅτε καὶ τῆς οἰκείας ὑγρότητος ἐξηρημένης. δριμεῖα δὲ καὶ ἡ τέφρα καὶ ἡ κονία ἢ ἀπ' αὐτῶν. μάλιστα δὲ φασὶ τὴν ἀπὸ τῆς ἀμυγδαλῆς.

[6] Πρὸς δὴ τὰς καμινιάς καὶ τὰς ἄλλας τέχνας ἄλλη ἄλλοις χρησίμη. ἐμπυρεῦσθαι δὲ ἄριστα συκῇ καὶ ἐλάᾳ· συκῇ μὲν, ὅτι γλίσχρον τε καὶ μανόν, ὥστε ἔλκει τε καὶ οὐ δίεισιν· ἐλάᾳ δέ, ὅτι πυκνὸν καὶ λιπαρόν.

Πυρεῖα δὲ γίνεται μὲν ἐκ πολλῶν, ἄριστα δέ, ὥς φησι Μενέστωρ, ἐκ κитτοῦ· τάχιστα γὰρ καὶ πλεῖστον ἀναπνεῖ. πυρεῖον δὲ φασιν ἄριστον μὲν ἐκ τῆς ἀθραγένης καλουμένης ὑπὸ τινων· τοῦτο δ' ἐστὶ δένδρον ὅμοιον τῇ ἀμπέλῳ καὶ τῇ οἰνάνθῃ τῇ ἀγρίᾳ· ὥσπερ ἐκεῖνα καὶ τοῦτο ἀναβαίνει [7] πρὸς τὰ δένδρα. δεῖ δὲ τὴν ἐσχάραν ἐκ τούτων ποιεῖν τὸ δὲ τρύπανον ἐκ δάφνης· οὐ γὰρ ἐκ ταύτου τὸ ποιοῦν καὶ πάσχον, ἀλλ' ἕτερον εὐθὺ δεῖ κατὰ φύσιν, καὶ τὸ μὲν δεῖ παθητικὸν εἶναι τὸ δὲ ποιητικόν. οὐ μὴν ἀλλὰ καὶ ἐκ τοῦ αὐτοῦ γίνεται καί, ὥς γέ τινες ὑπολαμβάνουσιν, οὐδὲν διαφέρει. γίνεται γὰρ ἐκ ράμνου καὶ πρίνου καὶ φιλύρας καὶ σχεδὸν ἐκ τῶν πλείστων πλὴν ἐλάας· ὁ καὶ δοκεῖ ἄτοπον εἶναι· καὶ γὰρ σκληρότερον καὶ λιπαρὸν ἢ ἐλάα· τοῦτο μὲν οὖν ἀσύμμετρον ἔχει δῆλον ὅτι τὴν ὑγρότητα πρὸς τὴν πύρωσιν. ἀγαθὰ δὲ τὰ ἐκ ράμνου· ποιεῖ δὲ τοῦτο καὶ τὴν ἐσχάραν χρηστὴν· πρὸς γὰρ τῷ ξηρὰν καὶ ἄχυμον εἶναι δεῖ καὶ μαυτέραν, ἴν' ἢ τρίβις ἰσχύη, τὸ δὲ τρύπανον ἀπαθέστερον· δι' ὃ τὸ τῆς δάφνης ἄριστον· ἀπαθὲς γὰρ ὄν ἐργάζεται τῇ δριμύτητι. πάντα δὲ τὰ πυρεῖα βορείοις μὲν θᾶπτον καὶ μᾶλλον ἐξάπτεται, νοτίοις δὲ ἥττον· καὶ ἐν μὲν τοῖς μετεώροις μᾶλλον, ἐν δὲ τοῖς κοίλοις ἥττον.

[8] Ἀνίει δὲ τῶν ξύλων τὰ κέδρινα καὶ ἀπλῶς ὧν ἐλαιώδης ἡ ὑγρότης· δι' ὃ καὶ τὰ ἀγάλματά φασιν ἰδίειν ἐνίοτε· ποιοῦσι γὰρ ἐκ τούτων. ὁ δὲ καλοῦσιν οἱ μάντεις Εἰλειθυίας ἄφεδρον, ὑπὲρ οὗ καὶ ἐκθύονται, πρὸς τοῖς ἐλατίνοις γίνεται συνισταμένης τινὸς ὑγρότητος, τῷ σχήματι μὲν στρογγύλον μέγεθος δὲ ἡλίκον ἅπιον ἢ καὶ μικρῷ μειζον ἢ ἔλαττον. ἐκβλαστάνει δὲ μάλιστα τὰ ἐλαῖνα καὶ ἀργὰ κείμενα καὶ εἰργασμένα πολλάκις, ἐὰν ἱκμάδα λαμβάνῃ καὶ ἔχη τόπον νοτερόν· ὥσπερ ἤδη τις στροφεὺς τῆς θύρας ἐβλάστησε, καὶ εἰς κυλίκιον πλίνθινον τεθεῖσα κώπη ἐν πῆλῳ.

Libër VI

[1] Περί μὲν οὖν δένδρων καὶ θάμνων εἴρηται πρότερον· ἐπόμενον δ' εἰπεῖν περί τε τῶν φρυγανικῶν καὶ ποιωδῶν καὶ εἴ τινες ἐν τούτοις ἕτεραι συμπεριλαμβάνονται φύσεις· οἷον ἥ γε σιτηρὰ ποιώδης ἐστί.

Πρῶτον δὲ λέγωμεν περὶ τῆς φρυγανικῆς· αὕτη γὰρ ἐγγυτέρω τῶν προειρημένων διὰ τὸ ξυλώδης εἶναι. πανταχοῦ μὲν οὖν ἴσως αἰεὶ τὸ ἄγριον τοῦ ἡμέρου πλεῖον, εἰ δὲ μή, περί γε τὴν φρυγανικὴν οὐσίαν· ὀλίγον γὰρ τὸ ἡμερον αὐτῆς, ὅπερ σχεδὸν ἐν τοῖς στεφανωτικοῖς ἐστίν, οἷον ῥοδωνία ἰωνία διόσανθος ἀμάρακος ἡμεροκαλλές, ἐτι δὲ ἔρπυλλος σισύμβριον ἐλένιον ἀβρότονον. ἅπαντα γὰρ ταῦτα ξυλώδη καὶ μικρόφυλλα, δι' [2] ὃ καὶ φρυγανικά. καὶ ἐπὶ τῶν λαχανηρῶν δ' ὁμοίως, οἷον ῥάφανος πῆγανον καὶ ὅσα παραπλήσια τούτοις ἐστίν. ὑπὲρ ὧν οὐχ ἦττον ἴσως ἀρμόττει κατὰ τὴν οἰκείαν προσηγορίαν εἰπεῖν, ὅταν περὶ στεφανωμάτων καὶ λαχάνων ποιῶμεθα μνεῖαν. νῦν δὲ πρῶτον περὶ τῶν ἀγρίων λέγωμεν. ἐστὶν αὐτῶν εἶδη καὶ μέρη πλείω, ἃ δεῖ διαιρεῖν καὶ τοῖς καθ' ἕκαστον γένος καὶ τοῖς ὅλοις εἶδεσι.

Μεγίστην δ' ἂν τις λάβοι διαφορὰν τῶν ὅλων γενῶν, ὅτι τὰ μὲν ἀνάκανθα τὰ δὲ ἀκανθώδη τυγχάνει. πάλιν δ' ἐν ἑκατέρῳ τούτων πολλὰι διαφοραὶ γενῶν καὶ εἰδῶν, ὑπὲρ ὧν καθ' ἑκάτερα πειρατέον εἰπεῖν.

[3] Τῶν ἀκανθικῶν δὴ τὰ μὲν ἀπλῶς εἰσιν ἄκανθαι, ὥσπερ ἀσφάραγος καὶ σκορπίος· οὐ γὰρ ἔχουσι φύλλον οὐδὲν παρὰ τὴν ἄκανθαν. τὰ δὲ φυλλάκανθα, καθάπερ ἄκανος ἡρύγγιον κνηκος· ταῦτα γὰρ καὶ τὰ τοιαῦτα ἐπὶ τῶν φύλλων ἔχει τὴν ἄκανθαν, δι' ὃ καὶ φυλλάκανθα καλεῖται. τὰ δὲ καὶ παρὰ τὴν ἄκανθαν ἕτερον ἔχει φύλλον, ὥσπερ ἡ ὄνωνις καὶ ὁ τρίβολος καὶ ὁ φέως, ὃν δὴ τινες καλοῦσι στοιβήν. ὁ δὲ τρίβολος καὶ περικαρπιάκανθός ἐστιν· ἔχει γὰρ ἀκάνθας ἐν τῷ περικαρπίῳ, δι' ὃ καὶ τοῦτο ἴδιον πρὸς ἅπαντα ὡς εἰπεῖν· ἐπεὶ πτορθάκανθά γε πολλὰ καὶ τῶν δένδρων καὶ τῶν θαμνωδῶν ἐστίν, οἷον ἀχρὰς ῥόα παλίουρος βάτος ῥοδωνία κάππαρις. ἐν μὲν οὖν τοῖς ἀκανθικοῖς ταῦτας ἂν τις ὡς εἰπεῖν τύπῳ λάβοι τὰς διαφοράς.

[4] Ἐν δὲ τοῖς ἀνακάνθοις οὐκ ἐστὶν οὕτως διαλαβεῖν τοῖς γένεσιν· ἡ γὰρ τῶν φύλλων ἀνωμαλία μεγέθει καὶ μικρότητι καὶ σχήμασιν ἄπειρος καὶ ἀσαφής· ἀλλὰ δεῖ πειρᾶσθαι κατ' ἄλλον τρόπον διαιρεῖν. πλείω δὲ ἐστί τὰ γένη τὰ τούτων καὶ διαφορὰς ἔχοντα μεγάλας, οἷον κίσθος μῆλωθρον ἐρευθεδανὸν σπειραία κνέωρον ὀρίγανος θύμβρα σφάκος ἐλελίσφακος πράσιον κόνυζα μελισσόφυλλον ἕτερα τοιαῦτα· πρὸς τούτοις ἐτι τὰ

ναρθηκῶδη καὶ ἐννευρόκαυλα, καθάπερ μάραθον ἵπομάραθον ναρθηκία νάρθηξ καὶ τὸ καλούμενον ὑπὸ τινων μυοφόνον καὶ ὅσα ὅμοια τούτοις. ἅπαντα γὰρ ἂν τις καὶ ταῦτα καὶ ὅλως εἴ τι ναρθηκῶδές ἐστι τῆς φρυγανικῆς θεῖη φύσεως.

[2.1] Εἶδη δὲ καὶ διαφοραὶ καθ' ἕκαστον τῶν εἰρημένων εἰσὶ τῶν μὲν φανερώτεραι τῶν δὲ ἀφανέστεραι. καὶ γὰρ κίσθου δύο γένη διαιροῦσι, τὸ μὲν ἄρρεν τὸ δὲ θῆλυ, τῷ τὸ μὲν μεῖζον καὶ σκληρότερον καὶ λιπαρώτερον εἶναι καὶ τὸ ἄνθος ἐπιπορφυρίζον· ἄμφω δὲ ὅμοια τοῖς ἀγρίοις ρόδοις, πλὴν ἐλάττω καὶ ἄοσμα.

[2] Δύο δὲ εἶδη καὶ τοῦ κνεώρου· ὁ μὲν γὰρ λευκὸς ὁ δὲ μέλας. ἔχει δὲ ὁ μὲν λευκὸς τὸ φύλλον δερματῶδες πρόμηκες ὁμοιόσχημον τρόπον τινὰ τῇ ἐλάᾳ, ὁ δὲ μέλας οἶον ἢ μυρική σαρκῶδες· ἐπίγειος δὲ μᾶλλον ὁ λευκός· ἔστι δὲ ὁσμώδης, ὁ δὲ μέλας ἄοσμος. τὴν δὲ ρίζαν τὴν εἰς βάθος ἄμφω μεγάλην ἔχουσι καὶ τοὺς ἀκρεμόνας πολλοὺς καὶ παχεῖς καὶ ξυλῶδεις ἀπ' αὐτῆς τῆς γῆς ἢ μικρὸν ἄνω σχιζομένους, ξυλωδεστάτην δέ. γλίσχρον δὲ σφόδρα, δι' ὃ καὶ χρῶνται πρὸς τὸ καταδεῖν καὶ περιλαμβάνειν, ὥσπερ τῷ οἴσῳ. βλαστάνει δὲ καὶ ἀνθεῖ μετ' ἰσημερίαν μετοπωρινὴν καὶ ἀνθεῖ πολὺν χρόνον.

[3] Καὶ τῆς ὀρίγανου δὲ ἡ μέλαινα ἄκαρπος ἡ δὲ λευκὴ κάρπιμος. καὶ θύμον τὸ μὲν λευκὸν τὸ δὲ μέλαν εὐανθές δὲ σφόδρα· περὶ τροπὰς γὰρ ἀνθεῖ θερινάς. ἀφ' οὗ καὶ ἡ μέλιττα λαμβάνει τὸ μέλι, καὶ τούτῳ φασὶν οἱ μελιττουργοὶ δῆλον εἶναι πότερον εὐμελιτοῦσι ἢ οὐ· καλῶς γὰρ ἀπανθήσαντος εὐμελιτεῖν· βλάπτει δὲ καὶ ἀπόλλυσι τὴν ἀνθησιν ἐὰν ὕδωρ ἐπιγένηται.

Σπέρμα δὲ κάρπιμον ἡ μὲν θύμβρα καὶ ἔτι μᾶλλον ἡ ὀρίγανος ἔχει φανερόν, τοῦ θύμου δ' οὐκ ἔστι λαβεῖν, ἀλλ' ἐν τῷ ἀνθεὶ πως ἀναμέμικται· σπείρουσι γὰρ τοῦτο καὶ ἀναβλαστάνει.

[4] ζητοῦσι δὲ καὶ λαμβάνουσιν οἱ ἐξάγειν Ἀθήνησι βουλόμενοι τὸ γένος. ἴδιον δὲ ἔχει καὶ πρὸς ταῦτα καὶ σχεδὸν πρὸς τὰ ἄλλα τὸ κατὰ τοὺς τόπους· οὐ γὰρ φασι δύνασθαι φύεσθαι καὶ λαμβάνειν ὅπου μὴ ἀναπνοὴ διῴκνεϊται ἢ ἀπὸ τῆς θαλάττης· δι' ὃ οὐδ' ἐν Ἀρκαδίᾳ γίνεται· θύμβρα δὲ καὶ ὀρίγανος καὶ τὰ τοιαῦτα πολλὰ καὶ πολλαχοῦ. παραπλήσιον οὖν τὸ συμβαίνειν τοῦτο καὶ ἐπὶ τῆς ἐλάας· οὐδὲ γὰρ οὐδ' ἐκείνη δοκεῖ τριακοσίων σταδίων ἀπὸ θαλάττης ἐπάνω φύεσθαι.

[5] Σφάκος δὲ καὶ ἐλελίσφακος διαφέρουσιν ὥσάν τὸ μὲν ἡμέρον τὸ δὲ ἄγριον· λειότερον γὰρ τὸ φύλλον τοῦ σφάκου καὶ ἐλαττον καὶ αὐχμηρότερον,

τὸ δὲ τοῦ ἐλελισφάκου τραχύτερον.

Δύο δὲ γένη καὶ τοῦ πρασίου· τὸ μὲν γὰρ ἔχει ποῶδες τὸ φύλλον καὶ μᾶλλον ἐπικεχαραγμένον, ἔτι δὲ τὰς ἐντομὰς ἐνδὴλους σφόδρα καὶ βαθείας, ὧ καὶ οἱ φαρμακοπῶλαι χρῶνται πρὸς ἓνια· τὸ δὲ ἕτερον στρογγυλότερον καὶ αὐχμῶδες σφόδρα, καθάπερ τοῦ σφάκου, καὶ τὰς ἐντομὰς ἀμαυροτέρας ἔχον καὶ ἐπικεχαραγμένον ἦττον.

[6] Κονύζης δὲ τὸ μὲν ἄρρεν τὸ δὲ θῆλυ. διαφορὰς δὲ ἔχει καθάπερ τὰ ἄλλα τὰ οὕτω διαιρούμενα· τὸ μὲν γὰρ θῆλυ λεπτοφυλλότερον καὶ ξυνεσθηκὸς μᾶλλον καὶ τὸ ὅλον ἔλαττον, τὸ δὲ ἄρρεν μεῖζον τε καὶ παχυκαυλότερον καὶ πολυκλωνότερον καὶ τὸ φύλλον μεῖζον καὶ λιπαρώτερον ἔχον, ἔτι δὲ τὸ ἄνθος λαμπρότερον. καρποφόρα δὲ ἅμφω· τὸ δὲ ὅλον ὀψιβλαστεῖ καὶ ὀψιανθεῖ περὶ Ἀρκτοῦρον καὶ μετ' Ἀρκτοῦρον λαμβάνει. βαρεῖα δὲ ἡ ὁσμή τοῦ ἄρρενος, ἡ δὲ τῆς θηλείας δριμυτέρα, δι' ὃ καὶ πρὸς τὰ θηρία χρησίμη.

Ταῦτα μὲν οὖν καὶ τὰ τοιαῦτα ὥσπερ διαφέροντα. πάλιν δὲ ἄλλα μονοειδῆ τυγχάνοντα καὶ τῶν πρότερον εἰρημένων καὶ ἕτερα παρὰ ταῦτα· πλείω γὰρ ἐστί.

[7] Τὸ δὲ νάρθηκῶδες, καὶ γὰρ καὶ τοῦτο τῶν φρυγανικῶν, πολλὰς περιεῖληφεν ιδέας· ἐν οἷς πρῶτον ὑπὲρ τοῦ κοινοῦ πᾶσι λεκτέον, ὑπὲρ νάρθηκός τε καὶ νάρθηκίας, εἴτε τὸ αὐτὸ γένος ἐστὶν ἀμφοῖν διαφέρον δὲ κατὰ μέγεθος, εἴτε καὶ ἕτερον ὥσπερ τινές φασιν. ἡ δ' οὖν φανερά φύσις ἀμφοῖν ὁμοία πλὴν κατὰ τὸ μέγεθος· ὁ μὲν γὰρ νάρθηξ γίνεται μέγας σφόδρα ἡ δὲ νάρθηκία μικρά. μονόκαυλα δ' ἅμφω καὶ γονατώδη, ἀφ' ὧν τὰ τε φύλλα βλαστάνει καὶ καυλοὶ [8] τινες μικροί· βλαστάνει δὲ παραλλάξ τὰ φύλλα· λέγω δὲ παραλλάξ ὅτι οὐκ ἐκ τοῦ αὐτοῦ μέρους τῶν γονάτων ἀλλ' ἐναλλάξ· περιελιφότα δὲ τὸν καυλὸν ἐπὶ πολὺ, καθάπερ τὰ τοῦ καλάμου, πλὴν ἀποκεκλιμένα ταῦτα μᾶλλον διὰ τὴν μαλακότητα καὶ τὸ μέγεθος· μέγα γὰρ τὸ φύλλον καὶ μαλακὸν καὶ πολυσχιδές, ὥστε εἶναι σχεδὸν τριχῶδες· ἔχει δὲ μέγιστα τὰ κάτω πρὸς τὴν γῆν καὶ ἀεὶ κατὰ λόγον. ἄνθος δὲ μηλινοειδὲς ἀμαυρόν, καρπὸν δὲ παρόμοιον τῷ ἀνήθῳ πλὴν μεῖζω. ἐξ ἄκρου δὲ σχίζεται καὶ ἔχει τινὰς οὐ μεγάλους καυλοὺς· ἐνταῦθα δὲ τό τε ἄνθος καὶ ὁ καρπός. ἔχει δὲ καὶ ἄνθος καὶ καρπὸν καὶ ἐν τοῖς παρακαυλίζουσι δι' ὅλου, καθάπερ τὸ ἄνηθον. ἐπετειόκαυλον δέ, καὶ ἡ βλάστησις τοῦ ἥρος πρῶτον μὲν τῶν φύλλων ἔπειτα τοῦ καυλοῦ, καθάπερ τῶν ἄλλων. ρίζαν δὲ ἔχει βαθεῖαν, ἔστι δὲ μονόρριζον. ὁ μὲν οὖν νάρθηξ τοιοῦτος.

[9] Τῶν δ' ἄλλων τὰ μὲν ὁμοιότερα τούτῳ τὸν καυλὸν ἔχει «κοῖλον»,

καθάπερ ὁ μανδραγόρας καὶ τὸ κώνειον καὶ ὁ ἐλλέβορος καὶ ὁ ἀνθήρικος· τὰ δ' οἷον ἐννευρόκαυλα τυγχάνει, καθάπερ μάραθρον μυοφόνον τὰ ὅμοια τούτοις. ἴδιος δὲ ὁ καρπὸς τοῦ μανδραγόρου τῷ μέλας τε καὶ ῥαγώδης καὶ οἰνώδης εἶναι τῷ χυμῷ.

[3.1] Μέγιστα δὲ καὶ ἰδιώταται φύσεις ἢ τε τοῦ σιλφίου καὶ ἢ τοῦ παπύρου ἐν Αἰγύπτῳ· νάρθηκώδη γὰρ καὶ ταῦτα ἐστίν· ὑπὲρ ὧν τοῦ μὲν παπύρου πρότερον εἵπομεν ἐν τοῖς ἐνύδροις, ὑπὲρ θατέρου δὲ νῦν λεκτέον.

Τὸ δὲ σίλφιον ἔχει ρίζαν μὲν πολλήν καὶ παχεῖαν, τὸν δὲ καυλὸν ἡλίκον νάρθηξ, σχεδὸν δὲ καὶ τῷ πάχει παραπλήσιον, τὸ δὲ φύλλον, ὃ καλοῦσι μάσπετον, ὅμοιον τῷ σελίνῳ· σπέρμα δ' ἔχει πλατύ, οἷον φυλλῶδες, τὸ λεγόμενον φύλλον. ἐπετειόκαυλον δ' ἐστίν, ὥσπερ ὁ νάρθηξ. ἅμα μὲν οὖν τῷ ἦρι τὸ μάσπετον τοῦτο ἀφήσιν, ὃ καθαίρει τὰ πρόβατα καὶ παχύνει σφόδρα καὶ τὰ κρέα θυμαστα ποιεῖ τῇ ἡδονῇ· μετὰ δὲ ταῦτα καυλόν, «ὄν» ἐσθίεσθαι πάντα τρόπον ἐφθὸν ὀπτόν, καθαίρειν δὲ καὶ τοῦτόν φασι τὰ σώματα [2] τετταράκοντα ἡμέραις. ὀπὸν δὲ διττὸν ἔχει, τὸν μὲν ἀπὸ τοῦ καυλοῦ τὸν δὲ ἀπὸ τῆς ρίζης, δι' ὃ καλοῦσι τὸν μὲν καυλίαν τὸν δὲ ρίζιαν. ἢ δὲ ρίζα τὸν φλοιὸν ἔχει μέλανα, καὶ τοῦτον περιαιροῦσιν. ἔστι δὲ ὥσπερ μέταλλα τῶν ρίζοτομιῶν αὐτοῖς, ἐξ ὧν ὁπόσον ἂν δοκῇ συμφέρειν ταμιευόμενοι πρὸς τὰς τομὰς καὶ τὸ προϋπάρχον τέμνουσιν· οὐκ ἔξεστι γὰρ οὔτε παρατέμνειν οὔτε πλείον τῶν τεταγμένων· καὶ γὰρ διαφθείρεται καὶ σήπεται τὸ ἄργον ἐὰν χρονίζῃ. κατεργάζονται δὲ ἄγοντες εἰς τὸν Πειραιᾶ τόνδε τὸν τρόπον· ὅταν βάλῳσι εἰς ἄγγεῖα καὶ ἄλευρα μίξῳσι, σείουσι χρόνον συχνόν, ὅθεν καὶ τὸ χρῶμα λαμβάνει καὶ ἐργασθὲν ἄσηπτον ἤδη διαμένει. τὰ μὲν οὖν κατὰ τὴν ἐργασίαν καὶ τομὴν οὕτως ἔχει.

[3] Τόπον δὲ πολὺν ἐπέχει τῆς Λιβύης· πλείω γὰρ φασιν ἢ τετρακισχίλια στάδια· πλείστα δὲ γίνεσθαι περὶ τὴν σύρτιν ἀπὸ τῶν Εὐεσπερίδων. ἴδιον δὲ τὸ φεύγειν τὴν ἐργαζομένην καὶ ἀεὶ συνεργαζομένης καὶ συνημερουμένης ἐξαναχωρεῖν, ὡς οὐ δεομένου δήλον ὅτι θεραπείας ἀλλ' ὄντος ἀγρίου. φασὶ δ' οἱ Κυρηναῖοι φανῆναι τὸ σίλφιον ἔτεσι πρότερον ἢ αὐτοὶ τὴν πόλιν ᾤκησαν ἐπτά· οἰκοῦσι δὲ μάλιστα περὶ τριακόσια εἰς Σιμωνίδην ἄρχοντα Ἀθήνησιν.

[4] Οἱ μὲν οὖν οὕτω λέγουσιν. οἱ δὲ τοῦ σιλφίου τὴν ρίζαν φασὶ γίνεσθαι πηχυαίαν ἢ μικρῷ μείζω. ταύτην δὲ ἔχειν ἐπὶ τοῦ μέσου κεφαλὴν, ὃ καὶ μετεωρότατόν ἐστι καὶ σχεδὸν ὑπὲρ γῆς, καλεῖσθαι δὲ γάλα· ἐξ ἧς δὴ φύεσθαι μετὰ ταῦτα καὶ τὸν καυλόν, ἐκ δὲ τούτου μαγύδαριν τὸ καὶ καλούμενον φύλλον· τοῦτο δ' εἶναι σπέρμα· καὶ ὅταν νότος λαμπρὸς πνεύσῃ μετὰ Κύνα

διαρρίπτεσθαι, ἐξ οὗ φύεσθαι τὸ σίλφιον. τῷ αὐτῷ δὲ ἔτει τὴν τε ῥίζαν γίνεσθαι καὶ τὸν καυλόν· οὐθὲν δὲ τοῦτο ἴδιον, καὶ γὰρ ἐπ' ἄλλων, εἰ μὴ τοῦτο λέγουσιν ὅτι εὐθὺς φύεται μετὰ τὴν διάρριψιν.

[5] Καὶ τοῦτο ἴδιον καὶ διάφορον τοῖς πρότερον, ὅτι φασὶ δεῖν ὀρύττειν ἐπέτειον· ἐὰν δὲ ἐαθῇ, φέρειν μὲν τὸ σπέρμα καὶ τὸν καυλόν, χεῖρω δὲ γίνεσθαι καὶ ταῦτα καὶ τὴν ῥίζαν, ὀρυττομένας δὲ βελτίους γίνεσθαι διὰ τὸ μεταβάλλεσθαι τὴν γῆν. ἐναντίον δὲ τοῦτο τῷ φεύγειν τὴν ἐργάσιμον. ἐσθίεσθαι καὶ τὰς ῥίζας προσφάτους κατατεμνομένας εἰς ὄξος. τὸ δὲ φύλλον τῇ χροιά χρυσοειδὲς [6] εἶναι. ἐναντίον δὲ καὶ τὸ μὴ καθαίρεσθαι τὰ πρόβατα τὸ φύλλον ἐσθίοντα· φασὶ γὰρ καὶ τοῦ ἥρος καὶ τοῦ χειμῶνος εἰς ὅρος ἀφιέναι, νέμεσθαι δὲ τοῦτό τε καὶ ἕτερον ὁμοιον ἀβροτόνῳ· θερμαντικὰ δ' ἄμφω δοκεῖ εἶναι καὶ κάθαρσιν μὲν οὐ ποιεῖν, ἀναξηραίνειν δὲ καὶ συμπτέττειν· ἐὰν δὲ τι νοσοῦν ἢ κακῶς ἔχον εἰσέλθῃ πρόβατον, ὑγιάζεσθαι ταχέως ἢ ἀποθνήσκειν, ὥς δ' ἐπὶ τὸ πολὺ σώζεσθαι μᾶλλον. ταῦτα μὲν ὁποτέρως ἔχει σκεπτέον.

[7] Ἡ δὲ καλουμένη μαγύδαρις ἕτερόν ἐστι τοῦ σιλφίου μανότερόν τε καὶ ἥττον δριμὺ καὶ τὸν ὀπὸν οὐκ ἔχει· διάδηλος δὲ ἐστὶ καὶ τῇ ὄψει τοῖς ἐμπείροις. γίνεται δὲ περὶ Συρίαν καὶ οὐκ ἐν Κυρήνῃ· φασὶ δὲ καὶ ἐν τῷ Παρνασίῳ ὄρει πολλήν· ἔνιοι δὲ σίλφιον τοῦτο καλοῦσιν. εἰ δὲ φεύγει τὴν ἐργάσιμον ὥσπερ τὸ σίλφιον σκεπτέον, ὡσαύτως δὲ καὶ εἰ τι ὁμοιον ἢ παραπλήσιον ἔχει φύλλον τε πέρι καὶ καυλοῦ, καὶ εἰ ὅλως ἀφίησι τι δάκρυον. τὴν μὲν οὖν ναρθηκώδη [καὶ ὅλως τὴν ἀκανθώδη] φύσιν ἐν τοῖς τοιούτοις θεωρητέον.

[4.1] Τῆς δ' ἀκανθικῆς, ἐπόμενον γὰρ τοῦτο εἰπεῖν, ἐπειδὴ διήρηται τὸ μὲν ἀκανθῶδες ὅλως τὸ δὲ φυλλάκανθον, ὑπὲρ ἑκατέρου χωρὶς λεκτέον, καὶ τρίτου δὴ περὶ τοῦ καὶ παρὰ τὴν ἀκανθαν ἔχοντος φύλλον, ὥσπερ ὁ τε φέως καὶ ὁ τρίβολος. καὶ ἡ κάππαρις ἴδιον ἔχει τὸ μὴ μόνον τὴν ἐκ τῶν καυλῶν ἀκανθαν ἔχειν ἀλλὰ καὶ τὸ φύλλον ἐπακανθίζον. τῶν δὲ διηρημένων εἰδῶν πλεῖστον μὲν ἐστὶ τὸ φυλλάκανθον, ἐλάχιστον δὲ ὥς εἰπεῖν τὸ ἀκανθῶδες ὅλως. βραχὺ γάρ τι ἀμπαν ἐστίν, ὥσπερ ἐλέχθη, καὶ σχεδὸν οὐ ῥάδιον λαβεῖν παρὰ τε τὸν ἀσφάραγον καὶ τὸν σκορπίον.

[2] Ἀμφοτέρα δὲ ταῦτα ἀνθεῖ μετὰ ἰσημερίαν φθινοπωρινήν. ὁ μὲν σκορπίος ἐν τῷ σαρκώδει τῷ ἐποιδοῦντι τῷ ὑπὸ τὸ ἄκρον τῆς ἀκάνθης ἔχων τὸ ἄνθος ἐξ ἀρχῆς μὲν λευκὸν ὕστερον δ' ἐπιπορφυρίζον. ὁ δὲ ἀσφάραγος ἐκφύων παρὰ τὰς ἀκάνθας κορυνῶδες μικρόν, ἐκ τούτου δὲ ἐστὶ τὸ ἄνθος μικρόν. ὁ δὲ

σκορπίος μονόρριζον και βαθύρριζον, ὁ δὲ ἀσφάραγος βαθύρριζον τε εὖ μάλα και πολύρριζον πυκναῖς ταῖς ρίζαις, ὥστε τὸ ἄνω συνεχὲς εἶναι αὐτῶν, ἀφ' οὗ και αἱ βλαστήσεις αὐτῶν τῶν καυλῶν· ἀναβλαστάνει δὲ ὁ καυλὸς ἐκ τῆς ἀσφαραγιάς τοῦ ἥρος και ἐδώδιμός ἐστιν· εἴθ' οὕτως ἀποτραχύνεται και ἐξακαθοῦται προοιούσης τῆς ὥρας· ἡ δὲ ἄνθησις οὐκ ἐκ τούτου μόνον ἀλλὰ και ἐκ τῶν πρότερον· οὐ γὰρ ἐπετεϊόκαυλόν ἐστι. τὰ μὲν οὖν ὅλως ἀκανθώδη τοιαύτην τινὰ ἔχει φύσιν.

[3] Τῶν δὲ φυλλακάνθων τὸ πλεῖστον γένος ὡς ἀπλῶς εἰπεῖν ἀκανῶδες τυγχάνει· λέγω δὲ τὸ ἀκανῶδες, ὅτι τὸ κύημα και ἐν ᾧ τὸ ἄνθος ἢ και ὁ καρπὸς ἄκανος ἢ ἀκανῶδες πάντων ἐστί. διαφορὰν δὲ ἔχει ἐν ἑαυτῷ και μεγέθει και σχήματι και χρώματι και πλήθει και ὀλιγότητι τῶν ἀκανθῶν και τῶν ἄλλων. ἔξω γὰρ ὀλίγων πάνυ, καθάπερ τοῦ στρουθίου τε και τοῦ σόγκου και εἴ τινων ἐτέρων, τὰ λοιπὰ πάντα ὡς εἰπεῖν τοιαύτην ἔχει τὴν φύσιν· ἐπεὶ και ὁ σόγκος τὴν γε φύσιν ἀκανθώδη ἔχει, τὸ δὲ σπερματικὸν οὐχ ὁμοιον· ἀλλὰ τὰ γε τοιαῦτα πάντα οἶον ἄκορνα λευκάκανθα χάλκειος κνήκος πολυάκανθος ἀτρακτυλὶς ὀνόπυξος ἰξίνη χαμαιλέων· πλὴν οὗτος οὐ φυλλάκανθος, σκόλυμος δέ, ὃς και λειμωνία, φυλλάκανθος· [4] και τᾶλλα, πλείω γὰρ ἐστί. διαφέρουσι δ' ἀλλήλων πρὸς τοῖς εἰρημένοις τῷ τὰ μὲν πολύκαυλα εἶναι και ἀποφύσεις ἔχειν, ὥσπερ ὁ ἄκανος, τὰ δὲ μονόκαυλα και μὴ ἔχειν, ὥσπερ ὁ κνήκος, ἔνια δ' ἄνωθεν ἔχειν ἐξ ἄκρου, καθάπερ τὸ ρύτρος. και τὰ μὲν εὐθὺς τοῖς πρώτοις ὑετοῖς βλαστάνειν τὰ δ' ὕστερον, ἔνια δὲ και τοῦ θέρους, ὥσπερ και ἡ τετράλιξ ὑπὸ τινων καλουμένη και ἡ ἰξίνη· και ἐπὶ τῶν ἀνθῶν ὁμοίως· ὀψιανθὴς γὰρ ὁ σκόλυμος και ἐπὶ πολὺν χρόνον.

[5] Διαφοραὶ δὲ τῶν μὲν ἀκάνων οὐκ εἰσὶ, τῆς κνήκου δ' εἰσὶν· ἡ μὲν γὰρ ἀγρία ἢ δ' ἡμερος. τῆς δ' ἀγρίας δύο εἶδη, τὸ μὲν προσεμφερὲς σφόδρα τῷ ἡμέρῳ πλὴν εὐθυκαυλότερον, δι' ὃ και πηγίοις ἔναι τῶν ἀρχαίων ἐχρῶντο γυναικῶν. καρπὸν δὲ ἔχει μέλανα και μέγαν και πικρόν. ἢ δ' ἑτέρα δασεῖα και τοὺς καυλοὺς ἔχει σογκῶδεις, ὥστε τρόπον τινὰ ἐπιγειόκαυλος γίνεται· διὰ γὰρ μαλακότητα τῶν καυλῶν κατακλίνεται πρὸς τὰς ἀρούρας· καρπὸν δ' ἔχει μικρὸν πώγωνος· σπερματώδεις πᾶσαι, πλὴν μειζόσι και πυκνοτέροις αἱ ἄγριαι. ἴδιον δὲ ἔχει πρὸς τὰ ἄλλα ἄγρια· τὰ μὲν γὰρ σκληρότερα και ἀκανθωδέστερα τῶν ἡμέρων, αὕτη δὲ μαλακώτερα και λειοτέρα.

[6] Ἡ δ' ἄκορνα προσεμφερῆς ὡς ἀπλῶς εἰπεῖν κατὰ τὴν πρόσοψιν τῇ κνήκῳ τῇ ἡμέρῳ, χρῶμα δ' ἐπίξανθον ἔχει και χυλὸν λιπαρόν. ἀτρακτυλὶς δὲ τις καλεῖται και λευκότερα τούτων· ἴδιον δὲ ἔχει τὸ περὶ τὸ φύλλον, ὅτι

ἀφαιρούμενον καὶ τῇ σαρκὶ προσφερόμενον αἱματώδη ποιεῖ τὸν χυλόν, δι' ὃ καὶ φόνον ἔνιοι καλοῦσι τὴν ἄκανθαν ταύτην· ἔχει δὲ καὶ τὴν ὀσμὴν δεινὴν καὶ φονώδη· ὁψὲ δὲ καὶ τελειοῖ τὸν καρπὸν πρὸς τὸ μετόπωρον. τὸ δ' ὅλον ὡς ἀπλῶς εἰπεῖν ἅπανα ἢ ἀκανικὴ φύσις ὀψίκαρπος. ἅπαντα δὲ ταῦτα φύεται καὶ ἀπὸ τοῦ σπέρματος καὶ ἀπὸ τῆς ρίζης, ὥστε βραχύν τινα γίνεσθαι τὸν ἀνὰ μέσον χρόνον τῆς ἐκφύσεως τε καὶ τῆς τοῦ σπέρματος τελειώσεως.

[7] Τοῦ σκολύμου δὲ οὐχ ὅτι τοῦτο μόνον ἴδιον, ὅτι τὴν ρίζαν ἐδώδιμον ἔχει καὶ ἐφθὴν καὶ ὠμὴν, ἀλλὰ καὶ ὅτι τότε ἀρίστην ὅταν ἀνθῇ καὶ ὅτι σκληρυνομένη ἀφίησιν ὀπόν. ἴδιον δὲ καὶ τὸ τῆς ἀνθήσεως· ἐπεὶ περὶ τροπᾶς.

[8] Σαρκώδης δὲ καὶ ἐδώδιμος ἢ τοῦ σόγκου· ἢ δὲ κῆσις οὐκ ἀκανώδης ἀλλὰ προμήκης αὐτοῦ· καὶ τοῦτ' ἴδιον μόνον ἔχει τῶν φυλλακάνθων ἀντεστραμμένως ἢ ὁ χαμαιλέων· ὁ μὲν γὰρ ἀφυλλάκανθος ὢν ἀκανίζει. γηράσκον δὲ τὸ ἄνθος ἐκπαπτοῦται, καθάπερ τὸ τῆς ἀπάτης καὶ τὸ τῆς μυρικής καὶ ὅσα παραπλήσια τούτοις. παρακολουθεῖ δὲ μέχρι τοῦ θέρους τὸ μὲν κυοῦν τὸ δὲ ἀνθοῦν τὸ δὲ σπέρμα τίκτον, μικρὰν ἱκμάδα καὶ κέντρον ἔχον· ξηραίνόμενον δὲ τὸ φύλλον διαχεῖται καὶ οὐκέτι κεντεῖ.

[9] Ἡ ἱξίνη δὲ φύεται μὲν οὐ πολλαχοῦ, ριζόφυλλον δὲ ἔστιν. ἀπὸ δὲ τῆς ρίζης μέσης ὁ σπερματικὸς ἄκανος ἐπιπέφυκεν, ὥσπερ μῆλον εὖ μάλα ἐπικεκρυμμένον ὑπὸ τῶν φύλλων· οὗτος δὲ ἐπὶ τοῦ ἄκρου φέρει τὸ δάκρυον εὖστομον, καὶ τοῦτό ἐστιν ἢ ἀκανθικὴ μαστίχη. ταῦτα μὲν οὖν καὶ τὰ τοιαῦτα πανταχοῦ σχεδόν ἔστιν.

[10] Ἡ δὲ κάκτος καλουμένη περὶ Σικελίαν μόνον, ἐν τῇ Ἑλλάδι δὲ οὐκ ἔστιν. ἴδιον δὲ παρὰ τὰλλα τὸ φυτόν· ἀφίησι γὰρ εὐθύς ἀπὸ τῆς ρίζης καυλοὺς ἐπιγείους, τὸ δὲ φύλλον ἔχει πλατὺ καὶ ἀκανθῶδες· καλοῦσι δὲ τοὺς καυλοὺς τούτους κάκτους· ἐδώδιμοι δὲ εἰσι περιλεπόμενοι μικρὸν ἐπίπικροι, καὶ θησαυρίζουσιν αὐτοὺς ἐν ἄλμῃ.

[11] Ἔτερον δὲ καυλὸν ὀρθὸν ἀφίησιν, ὃν καλοῦσι πτέρνικα· γίνεται δὲ καὶ οὗτος ἐδώδιμος πλὴν ἀθησαύριστος. τὸ δὲ περικάρπιον, ἐν ᾧ τὸ σπέρμα, τὴν μὲν μορφὴν ἀκανῶδες, ἀφαιρεθέντων δὲ τῶν παππωδῶν σπερμάτων ἐδώδιμον καὶ τοῦτο καὶ ἐμπερὲς τῷ τοῦ φοίνικος ἐγκεφάλῳ· καλοῦσι δὲ αὐτὸ σκαλίαν. τὰ μὲν οὖν φυλλάκανθα σκεπτέον ἐν τοιαύταις διαφοραῖς.

[5.1] Τὰ δὲ καὶ παρὰ τὴν ἄκανθαν ἔχοντα φύλλον, οἷον τὰ τοιαῦτα φέως ὄνωνις παντάδουσα τρίβολος ἱππόφεως μυάκανθος ... τε σφόδρα καὶ τὸ φύλλον ἔχει σαρκῶδες· πολυσχιδὲς δὲ καὶ πολύρριζον, οὐ μὴν κατὰ βάθους γε τὰς ρίζας ἔχον. βλαστάνει δὲ ἅμα Πλειάδι καὶ τοῖς πρώτοις ἀρότοις καὶ ἀφίησι

τότε τὸ φύλλον· οὐ γάρ ἐστιν ἐπέτειον ἀλλὰ χρονιώτερον.

[2] Τὸ δὲ τῆς καλπάριος ἴδιον, ὥσπερ ἐλέχθη, παρὰ ταῦτα· καὶ γὰρ τὸ φύλλον ἐπακανθίζον ἔχει καὶ τὸν καυλόν, οὐχ ὥσπερ ὁ φέως καὶ ἰππόφεως ἀνάκανθα τοῖς φύλλοις· μονόρριζον δὲ καὶ ἐπίγειον καὶ χαμαίκαυλον· βλαστάνει δὲ καὶ ἀνθεῖ τοῦ θέρους καὶ διαμένει τὸ φύλλον χλωρὸν ἄχρι Πλειάδος. χαίρει δὲ ὑφάμμοις καὶ λεπτογείοις χωρίοις· λέγεται δὲ ὡς ἐν τοῖς ἐργασίμοις οὐ θέλει φύεσθαι, καὶ ταῦτα περὶ τὰ ἄσθη καὶ ἐν εὐγείοις τόποις φυομένη καὶ οὐχ ὥσπερ σίλφιον ἐν ὀρεινοῖς· τοῦτο μὲν «οὔν» οὐ πάντως ἀληθές.

[3] Ὁ δὲ τρίβολος ἴδιον ἔχει, διότι περικαρπιάκανθός ἐστι. δύο δ' αὐτοῦ γένη· τὸ μὲν γὰρ ἔχει φύλλον ἐρεβινθῶδες, ἕτερος δὲ φυλλάκανθος· ἐπίγειοι δὲ ἄμφω καὶ πολλαχῇ σχιζόμενοι· ὀψιβλαστής δὲ μᾶλλον ὁ φυλλάκανθος καὶ φύεται περὶ τὰς αὐλὰς, τὸ δὲ σπέρμα τοῦ μὲν πρῶτου σησαμῶδες, τοῦ δὲ ὀψίου στρογγύλον ἐπίμελαν ἐν λοβῷ. καὶ τὰ μὲν οὔν παρὰ τὰ φύλλα καὶ ἄκανθαν ἔχοντα σχεδὸν ἐν τούτοις.

Ἡ δ' ὄνωνίς ἐστι πτορθάκανθον· ἐπέτειον δὲ τὸ φύλλον ἔχει πηγανῶδες παραπεφυκὸς παρ' ὅλον τὸν καυλόν, ὥστε καθάπερ στεφάνου τὴν ὅλην εἶναι μορφήν, διαλαμβανομένων ἐπαλλήλων· κολοβοανθὴς δὲ καὶ ἐλλοβόκαρπος ἀδιαφράκτως· [4] φύεται δ' ἐν τῇ γλίσχρᾳ καὶ γανώδει καὶ μάλιστα ἐν τῇ σπορίμῳ καὶ γεωργομένη, δι' ὃ καὶ πολέμιον τοῖς γεωργοῖς· καὶ ἔστι δυσώλεθρος· ὅταν γὰρ λάβῃ χώρας βάθος, ὠθεῖται κάτω εὐθὺς καὶ καθ' ἕκαστον ἔτος ἀποφύσεις ἀφεμένῃ εἰς τὰ πλάγια πάλιν εἰς τὸ ἕτερον ὠθεῖται κάτω· σπαστέα μὲν οὔν ὅλη· τοῦτο δὲ βραχείσης γίνεται τῆς γῆς καὶ ἀπόλλυται ῥῆον· ἐὰν δὲ καὶ μικρὸν ἀπολειφθῇ, ἀπὸ τούτου πάλιν βλαστάνει· ἄρχεται δὲ τῆς βλαστήσεως θέρους τελειοῦται δὲ μετοπώρου. τὰ μὲν οὔν ἄγρια τῶν φρυγανικῶν ἐκ τούτων θεωρεῖσθω.

[6.1] Τὰ δὲ ἡμερα βραχεῖάν τινα ἔχει θεωρίαν, ἅπερ ἐν τοῖς στεφανωματικοῖς ἐστι.

Τὰ δὲ καθ' ὅλου πειρατέον περὶ στεφανωμάτων εἰπεῖν, ὅπως ἅπαν περιληφθῇ τὸ γένος. ἡ γὰρ στεφανωματικὴ φύσις ἰδίαν τινὰ ἔχει τάξιν, ἐπιμιγνυμένη δὲ τὰ μὲν τοῖς φρυγανικοῖς τὰ δὲ τοῖς ποιώδεσι· δι' ὃ κἀκεῖνα συμπεριληπτέον ἐπιμινησκομένους ὡς ἂν ἦ ὁ καιρός, ἀρξαμένους [2] πρῶτον ἀπὸ τῶν φρυγανικῶν. διχῇ δὲ ἡ τούτων διαίρεσις ἡ κατὰ τὴν χρεῖαν. τῶν μὲν γὰρ τὸ ἄνθος μόνον χρήσιμον· καὶ τούτων τὸ μὲν εὖοσμον, ὥσπερ ἶον, τὸ δ' ἄνοσμον, ὥσπερ διόσανθος φλόξ. τῶν δὲ καὶ οἱ κλῶνες καὶ τὰ φύλλα καὶ

ὅλως ἡ πᾶσα φύσις εὖσομος, οἷον ἐρπύλλου ἐλένιου σισυμβρίου τῶν ἄλλων. ἄμφω δὲ φρυγανικά. κάκεινων τῶν ἀνθικῶν πολλῶν ἡ φύσις φρυγανώδης, ἡ μὲν ἐπέτειος οὖσα μόνον, ἡ δὲ πολυχρονιωτέρα, πλὴν ἰωνίας τῆς μελαίνης· αὕτη γὰρ ἄκλων ὅλως ἀλλὰ προσριζόφυλλος καὶ ἀείφυλλος, ὥς δὲ τινὲς φασὶ καὶ δυναμένη δι' ὅλου φέρειν τὸ ἄνθος, ἐὰν τρόπῳ τινὶ θεραπεύηται. τοῦτο μὲν ἴδιον ἂν ἔχοι.

[3] Τῶν δὲ ἄλλων μᾶλλον δὲ τῶν πάντων αἱ μὲν ὅλαι μορφαὶ σχεδὸν πᾶσι φανεραὶ· εἰ δὲ τινὰς ἄλλας ιδιότητας ἔχουσι, ταύτας λεκτέον, οἷον εἰ τὰ μὲν ἀπλᾶ δοκεῖ τοῖς εἶδεσιν εἶναι τὰ δὲ ἔχειν διαφοράς.

Ἀπλᾶ μὲν οὖν τὰ ξυλώδη, καθάπερ ἔρπυλλος σισύμβριον ἐλένιον· πλὴν εἰ τὰ μὲν ἄγρια τὰ δὲ ἡμερα καὶ «τὰ μὲν» εὖσομα τὰ δὲ ἄοσμότερα ἔστι· τούτων δὲ καὶ αἱ θεραπείαι καὶ αἱ χῶραι διάφοροι καὶ οἱ ἄερες. ἔνια δὲ καὶ τῶν ἀνθῶν, οἷον τὸ μέλαν ἶον· οὐ γὰρ ἔχειν δοκεῖ τοῦτο διαφορὰν ὥσπερ τὸ λευκόν· ἐμφανὲς γὰρ ἡ τούτων χροιά διαλλάττουσα, καὶ ἔτι δὴ μᾶλλον ἢ τῶν κρίνων, εἴπερ δὴ, καθάπερ φασίν, ἔνια καὶ πορφυρᾶ ἔστι.

[4] Τῶν δὲ ῥόδων πολλαὶ διαφοραὶ πλήθει τε φύλλων καὶ ὀλιγότητι καὶ τραχύτητι καὶ λειότητι καὶ εὐχροίᾳ καὶ εὐοσμίᾳ. τὰ μὲν γὰρ πλεῖστα πεντάφυλλα, τὰ δὲ δωδεκάφυλλα καὶ εικοσίφυλλα, τὰ δ' ἔτι πολλῶ πλεῖον ὑπεραίροντα τούτων· ἔνια γὰρ εἶναί φασιν ἃ καὶ καλοῦσιν ἑκατοντάφυλλα· πλεῖστα δὲ τὰ τοιαῦτά ἐστι περὶ Φιλίππους· οὗτοι γὰρ λαμβάνοντες ἐκ τοῦ Παγγαίου φυτεύουσιν· ἐκεῖ γὰρ γίνεται πολλά· σμικρὰ δὲ σφόδρα τὰ ἐντὸς φύλλα· ἡ γὰρ ἔκφυσις αὐτῶν οὕτως ὥστε εἶναι τὰ μὲν ἐκτὸς τὰ δ' ἐντὸς· οὐκ εὖσομα δὲ οὐδὲ μεγάλα τοῖς μεγέθεσιν. ἐν δὲ τοῖς μεγάλοις [5] εὐώδη μᾶλλον ὦν τραχὺ τὸ κάτω. τὸ δὲ ὅλον, ὥσπερ ἐλέχθη, καὶ ἡ εὐχροία καὶ ἡ εὐοσμία παρὰ τοὺς τόπους ἐστίν· ἐπεὶ καὶ τὰ ἐν γῇ τῇ αὐτῇ γινόμενα ποιεῖ τινὰ παραλλαγὴν εὐοσμίας καὶ ἄοσμίας. εὐοσμότατα δὲ τὰ ἐν Κυρήνῃ, δι' ὃ καὶ τὸ μύρον ἡδιστον. ἀπλῶς δὲ καὶ τῶν ἰων καὶ τῶν ἄλλων ἀνθῶν ἄκρατοι μάλιστα ἐκεῖθι αἱ ὁσμαί, διαφερόντως δὲ τοῦ κρόκου· πλεῖστον [6] γὰρ οὗτος δοκεῖ παραλλάττειν. φύεται μὲν οὖν ἡ ῥοδωνία καὶ ἐκ τοῦ σπέρματος· ἔχει δὲ ὑπὸ τὸ ἄνθος ἐν τῷ μήλῳ κνηκῶδες ἢ ἀκανῶδες, ἔχον δὲ τινὰ χνοῦν ὥστε ἐγγὺς εἶναι τῶν παππωδῶν σπερμάτων· οὐ μὴν ἀλλὰ διὰ τὸ βραδέως παραγίνεσθαι κατακόπτοντες, ὥς ἐλέχθη, τὸν καυλὸν φυτεύουσιν. ἐπικαιομένη δὲ καὶ ἐπιτεμνομένη βέλτιον φέρει τὸ ἄνθος· ἐωμένη γὰρ ἐξαύξεται καὶ ἀπολοχμοῦται. δεῖ δὲ καὶ μεταφυτεύειν πολλάκις· καὶ γὰρ οὕτω φασὶ κάλλιον γίνεσθαι τὸ ῥόδον. αἱ δ' ἄγριαι τραχύτεραι καὶ ταῖς ῥάβδοις καὶ τοῖς φύλλοις,

ἔτι δὲ ἄνθος ἀχρούστερον ἔχουσι καὶ ἔλαττον.

[7] Τὸ δὲ ἶον τὸ μέλαν τοῦ λευκοῦ διαφέρει κατὰ τε ἄλλα καὶ κατ' αὐτὴν τὴν ἰωνίαν, ὅτι πλατύφυλλός τε καὶ ἐγγειόφυλλος καὶ σαρκόφυλλός ἐστι, πολλὴν ἔχουσα ῥίζαν.

[8] Τὰ δὲ κρίνα τῇ μὲν χροιᾷ τὴν εἰρημένην ἔχει διαφοράν. μονόκαυλα δὲ ἐστὶν ὡς ἐπὶ πᾶν, δικαυλεῖ δὲ σπανίως· τάχα δὲ τοῦτο χώρας καὶ ἀέρος διαφορᾶς. καθ' ἕκαστον δὲ καυλὸν ὅτε μὲν ἐν κρίνον ὅτε δὲ πλείω γίνεται· βλαστάνει γὰρ τὸ ἄκρον· σπανιώτερα δὲ ταῦτα· ῥίζαν δὲ ἔχει πολλὴν σαρκώδη καὶ στρογγύλην· ὁ δὲ καρπὸς ἀφαιρούμενος ἐκβλαστάνει καὶ ἀποδίδωσι τὸ κρίνον πλὴν ἔλαττον. ποιεῖ δέ τινα καὶ δακρυώδη συρροήν, ἣν καὶ φυτεύουσιν, ὥσπερ εἵπομεν.

[9] Ὁ δὲ νάρκισσος ἢ τὸ λείριον, οἱ μὲν γὰρ τοῦτο οἱ δ' ἐκεῖνο καλοῦσι, τὸ μὲν ἐπὶ τῇ γῇ φύλλον ἀσφοδελῶδες ἔχει, πλατύτερον δὲ πολύ, καθάπερ ἡ κρινωνία, τὸν δὲ καυλὸν ἄφυλλον μὲν ποώδη δὲ καὶ ἐξ ἄκρου τὸ ἄνθος, καὶ ἐν ὑμένι τινὶ καθάπερ ἐν ἀγγεῖῳ «καρπὸν» μέγαν εὖ μάλα καὶ μέλανα τῇ χροιᾷ σχήματι δὲ προμήκη. οὗτος δ' ἐκπίπτων ποιεῖ βλάστησιν αὐτόματον· οὐ μὴν ἀλλὰ καὶ συλλέγοντες πηγνύουσι καὶ τὴν ῥίζαν φυτεύουσιν. ἔχει ῥίζαν σαρκώδη στρογγύλην μεγάλην. ὄψιον δὲ σφόδρα· μετὰ γὰρ Ἀρκτοῦρον ἡ ἄνθις καὶ περὶ ἰσημερίαν.

[10] Ὁ δὲ κρόκος ποώδης μὲν τῇ φύσει, καθάπερ καὶ ταῦτα, πλὴν φύλλω στενῷ, σχεδὸν γὰρ ὥσπερ τριχόφυλλόν ἐστιν· ὀψιανθὲς δὲ σφόδρα καὶ ὀψιβλαστὲς ἢ πρωϊανθὲς, ὁποτέρως τις λαμβάνοι τὴν ὥραν· «μετὰ» Πλειάδα γὰρ ἀνθεῖ καὶ ὀλίγας ἡμέρας· εὐθὺς δ' ἅμα τῷ φύλλῳ καὶ τὸ ἄνθος ὠθεῖ· δοκεῖ δὲ καὶ πρότερον· ῥίζα δὲ πολλή καὶ σαρκώδης, καὶ τὸ ὅλον εὗζων· φιλεῖ δὲ καὶ πατεῖσθαι καὶ γίνεται καλλίων κατατριβομένης πάτῳ τῆς ῥίζης· δι' ὃ καὶ παρὰ τὰς ὁδοὺς καὶ ἐν τοῖς κροτητοῖς κάλλιστος. ἡ δὲ φυτεία ἀπὸ ῥίζης.

[11] Ταῦτα μὲν οὖν οὕτω γεννᾶται. τὰ δ' ἄλλα ἄνθη τὰ προειρημένα πάντα σπείρεται, οἷον ἰωνία διόσανθος ἵφνον φλοῶς ἡμεροκαλλές· καὶ γὰρ αὐτὰ καὶ αἱ ῥίζαι ξυλώδεις· σπείρεται δὲ καὶ ἡ οἰνάνθη· καὶ γὰρ καὶ τοῦτο ἀνθῶδες. τὰ μὲν οὖν ἀνθικὰ σχεδὸν ἐν τούτοις καὶ τοῖς ὁμοίοις ληπτέον.

[7.1] Τὰ δὲ ἕτερα πάντα μὲν ἀνθεῖ καὶ σπερμοφορεῖ, δοκεῖ δὲ οὐ πάντα διὰ τὸ μὴ φανερόν εἶναι τινων τὸν καρπὸν· ἐπεὶ καὶ τὸ ἄνθος ἐνίων ἀμαυρόν· ἀλλ' ὅτι βραδέως καὶ χαλεπωτέρως παραγίνεται, τῇ φυτεῖᾳ χρῶνται μᾶλλον, [2] ὥσπερ ἐλέχθη καὶ κατ' ἀρχάς. καίτοι διατείνονται τινες ὡς οὐκ ἐχόντων καρπὸν· οἳ τε πεπειρᾶσθαι φάσκοντες καὶ τούτων εἰσὶν, αὐτοὶ γὰρ ζηρᾶναι

πολλάκις καὶ ἀποτρίβει καὶ σπείρει, καὶ οὐδεπώποτε βλαστεῖν οὔτε ἔρπυλλον οὔτε ἐλένιον οὔτε σισύμβριον οὔτε μίνθαν· πεπειρᾶσθαι γὰρ καὶ ταύτης. ἀλλ' ὅμως ἐκεῖνο ἀληθέστερον, ἢ τε τῶν ἀγρίων φύσις ἐπιμαρτυρεῖ· καὶ γὰρ ἔρπυλλός ἐστιν ἄγιος, ὃν κομίζοντες ἐκ τῶν ὀρῶν φυτεύουσι καὶ ἐν Σικυῶνι καὶ Ἀθήνησιν ἐκ τοῦ Ὑμηττοῦ· παρ' ἄλλοις δὲ ὅλως ὄρη πλήρη καὶ λόφοι, καθάπερ ἐν τῇ Θράκῃ· καὶ σισύμβριον δὲ καὶ τᾶλλα δριμυτέραν ἔχοντα τὴν ὁσμήν· ἔρπυλλος δ' ἐνίστε καὶ παντελῶς θυμώδης· ἃ δῆλον ὅτι ταύτην τὴν γένεσιν λαμβάνει.

[3] Ἀβρότονον δὲ μᾶλλον ἀπὸ σπέρματος βλαστάνει ἢ ἀπὸ ρίζης καὶ παρασπάδος· χαλεπῶς δὲ καὶ ἀπὸ σπέρματος· προμοσχευόμενον <δὲ> ἐν ὀστράκοις, ὥσπερ οἱ Ἀδώνιδος κῆποι, τοῦ θέρους· δύσριγον γὰρ σφόδρα καὶ ὅλως ἐπίκηρον καὶ ὅποι ὁ ἥλιος σφόδρα λάμπει· ἐμβιώσαν δὲ καὶ αὐξηθὲν μέγα καὶ ἰσχυρὸν καὶ δενδρῶδες ὥσπερ τὸ πῆγανον, πλὴν ξυλωδέστερον πολὺ τοῦτο καὶ ξηρότερον καὶ αὐχμωδέστερον.

[4] Ὁ δὲ ἀμάρακος ἀμφοτέρως φύεται, καὶ ἀπὸ παρασπάδος καὶ ἀπὸ σπέρματος· πολὺσπερμον δέ, καὶ τὸ σπέρμα εὖοσμον ὁσμῇ μαλακωτέρα· δύναται δὲ καὶ μεταφυτεύεσθαι. πολὺσπερμον δὲ καὶ τὸ ἀβρότονον καὶ οὐκ ἄοσμον. τοῦτο δὲ ρίζας μὲν ἔχει ὀρθὰς καὶ κατὰ βάθους. ἔστι γὰρ ὥσπερ μονόρριζον τῇ παχείᾳ τὰς δ' ἄλλας ἀφίησιν ἀπ' αὐτῆς· ὁ δ' ἀμάρακος καὶ ὁ ἔρπυλλος καὶ τὸ σισύμβριον καὶ τὸ ἐλένιον ἐπιπολαίους καὶ πολυσχιδεῖς καὶ ταρρῶδεις· ξυλωδεῖς δὲ πᾶσαι, πολὺ δὲ μᾶλλον ἢ τοῦ ἀβροτόνου καὶ διὰ τὸ μέγεθος καὶ τῇ ξηρότητι.

[5] Τοῦ δὲ ἐρπύλλου ἴδιος ἢ αὐξησις ἢ τῶν βλαστῶν· δύναται γὰρ ἐφ' ὅσονοῦν προῖεναι κατὰ μῆκος χάρακα λαβὼν ἢ πρὸς αἵμασιαν φυτευθεῖς ἢ κάτω καθιέμενος· εὐανξέστατος δὲ εἰς φρέαρ. εἶδη δὲ τοῦ μὲν ἡμέρου λαβεῖν οὐκ ἔστι, καθάπερ ἐλέγχθη. τοῦ δὲ ἀγρίου φασὶν εἶναι. τοῦ γὰρ ἐν τοῖς ὄρεσιν τὸν μὲν θυμβρώδη τινὰ καὶ δριμύτατον τὸν δ' εὖοσμον εἶναι καὶ μαλακώτερον.

[6] Ὡρα δὲ τῆς φυτείας πλείστον μετόπωρον, ἐν ᾧ σπεύδουσιν ὥς πρῶτα φυτεύειν· οὐ μὴν ἀλλ' ἔνια καὶ τοῦ ἥρος φυτεύουσιν. ἅπαντα φιλόσκια καὶ φίλυδρα καὶ φιλόκοπρα μάλιστα· αὐχμὸν δὲ δέχεται καὶ ὅλως ὀλιγοϋδρότατος ὁ ἔρπυλλος. κόπρῳ δὲ χαίρει, μάλιστα δὲ καὶ τῇ τῶν λοφούρων· φασὶ δὲ καὶ μεταφυτεύειν δεῖν πολλάκις· καλλίῳ γάρ. τὸ δὲ σισύμβριον, ὥσπερ ἐλέγχθη, καὶ ἐξίσταται μὴ μεταφυτευόμενον.

[8.1] Τῶν δ' ἀνθῶν τὸ μὲν πρῶτον ἐκφαίνεται τὸ λευκόιον, ὅπου μὲν ὁ ἀήρ

μαλακώτερος εὐθύς τοῦ χειμῶνος, ὅπου δὲ σκληρότερος ὕστερον, ἐνιαχοῦ τοῦ ἥρος. ἅμα δὲ τῷ ἴφῃ ἢ μικρόν τι ὕστερον καὶ τὸ φλόγινον καλούμενον τὸ ἄγριον· ταῦτα γὰρ ὧν οἱ στεφανήπλοκοι χρῶνται πολὺ ἐκτρέχει τῶν ἄλλων. μετὰ δὲ ταῦτα ὁ νάρκισσος καὶ τὸ λείριον, «καὶ τῶν ἀγρίων ἀνεμώνης γένος τὸ καλούμενον ὄρειον,» καὶ τὸ τοῦ βολβοῦ κώδουν· ἐμπλέκουσι γὰρ ἔνιοι καὶ τοῦτο εἰς τοὺς στεφάνους. ἐπὶ δὲ τούτοις ἡ οἰνάνθη καὶ τὸ μέλαν ἶον καὶ τῶν ἀγρίων ὃ τε ἐλείοχρυσος καὶ τῆς ἀνεμώνης ἡ λειμωνία καλουμένη καὶ τὸ ξίφιον καὶ ὑάκινθος καὶ σχεδὸν [2] ὅσοις ἄλλοις χρῶνται τῶν ὀρειῶν. τὸ δὲ ρόδον ὑστερεῖ τούτων καὶ τελευταῖον μὲν φαίνεται, πρῶτον δ' ἀπολείπει τῶν ἑαρινῶν· ὀλιγοχρονία γὰρ ἡ ἄνθησις. ὀλιγοχρονία δὲ καὶ τῶν ἀγρίων τὰ λοιπὰ πλὴν τῆς ὑακίνθου καὶ τῆς ἀγρίας καὶ τῆς σπαρτῆς· αὕτη δὲ διαμένει καὶ τὸ λευκὸν ἶον καὶ ἔτι πλείω τὸ φλόγινον· τὸ δὲ δὴ μέλαν ἶον, ὥσπερ εἴρηται, δι' ἐνιαυτοῦ θεραπείας τυγχάνον. ὡσαύτως δὲ καὶ ἡ οἰνάνθη, καὶ γὰρ τοῦτο ἀνθικὸν μὲν ποῶδες δὲ τὴν φύσιν, ἐάν τις ἀποκνίζη καὶ ἀφαιρῇ τὸ ἄνθος καὶ μὴ ἔῃ σπερματοῦσθαι καὶ ἔτι τόπον εὐεῖλον ἔχη· τὸ δὲ ἄνθος βοτρυῶδες καὶ λευκὸν καθάπερ τῶν ἀγρίων ... ταῦτα μὲν οὖν ὥσπερ ἑαρινὰ φαίνεται.

[3] Τὰ δὲ θερινὰ μᾶλλον ἢ τε λυχνὶς καὶ τὸ διόσανθος καὶ τὸ κρίνον καὶ τὸ ἴφυον καὶ ὁ ἀμάρακος ὁ Φρύγιος· ἔτι δὲ ὁ πόθος καλούμενος· οὗτος δ' ἐστὶ διττός, ὁ μὲν ἔχων τὸ ἄνθος ὅμοιον τῇ ὑακίνθῳ, ὁ δὲ ἕτερος ἄχρους λευκός, ὃ χρῶνται περὶ τοὺς τάφους· καὶ χρονιώτερος οὗτος. ἀνθεῖ δὲ καὶ ἡ ἴρις τοῦ θέρους καὶ τὸ στρουθίον καλούμενον· τῇ μὲν ὅψει καλὸν τὸ ἄνθος ἄοσμον δέ. μετοπώρου δὲ τὸ λείριον τὸ ἕτερον καὶ ὁ κρόκος, ὃ τε ὀρεινὸς ἄοσμος καὶ ὁ ἡμερος· εὐθύς γὰρ ἀνθοῦσι τοῖς πρώτοις ὕδασι. χρῶνται δὲ καὶ τῶν ἀγρίων τῷ τῆς ὀξυακάνθου καρπῷ καὶ τῷ ἄνθει τῷ τῆς μίλακος.

[4] Καὶ ταῖς μὲν ὥραις οὕτως ἐκάστων ἡ γένεσις. ὥς δὲ ἀπλῶς εἰπεῖν οὐδεὶς διαλείπεται χρόνος οὐδ' ἔστιν ἀνανθής, ἀλλὰ καὶ ὁ χειμὼν ἔχει καίπερ ἄγονος δοκῶν εἶναι διὰ τὴν κατάψυξιν τῶν μετοπωρινῶν μεταλαμβανόντων, ἐάν δὲ δὴ καὶ μαλακὸς ᾗ, πολλῷ μᾶλλον. ἀπλῶς γὰρ πάντ' ἢ τὰ πολλὰ καὶ ἐπεκτείνεται τῆς οἰκείας ὥρας, καὶ ἐάν ὁ τόπος εὐεῖλος ᾗ μᾶλλον· δι' ὃ καὶ συνέχεια γίνεται. χρόνοι μὲν οὖν οὗτοι καὶ ὥραι κατὰ τὰς γενέσεις.

[5] Βίος δὲ ἰωνιάς μὲν τῆς λευκῆς ἔτη μάλιστα τρία· γηράσκουσα δὲ ἐλαττοῦται καὶ ἴα λευκότερα φέρει. ροδωνιάς δὲ πέντε τὰ πρὸς τὴν ἀκμὴν μὴ ἐπικαομένης· χεῖρω δὲ καὶ ταύτης τὰ ρόδα γηρασκούσης. πρὸς εὐοσμίαν δὲ καὶ ρόδων καὶ ἴων καὶ τῶν ἄλλων ἀνθῶν μέγιστον ὁ τόπος συμβάλλεται καὶ ὁ ἀήρ πρὸς ἕκαστον οἰκεῖος· ἐν Αἰγύπτῳ γὰρ τὰ μὲν ἄλλα πάντ' ἄοσμα καὶ ἄνθη

καὶ ἀρώματα, αἱ δὲ μυρρίναι θαυμάσται τῇ εὐοσμίᾳ. προτερεῖν δέ φασι τῶν ἐνταῦθα καὶ ῥόδα καὶ ἴα καὶ τὰ ἄλλα ἄνθη καὶ διμήνω, καὶ διαμένειν πλείω τῶν παρ' ἡμῖν ἢ οὐκ ἐλάττω χρόνον ταῦτα.

[6] Δοκεῖ δὲ πολὺ πρὸς εὐοσμίαν διαφέρειν, ὥσπερ ἐλέχθη, καὶ ὁ ἐνιαυτὸς τοῖος ἢ τοῖος γενόμενος, οὐ μόνον ἐπομβρίαις καὶ αὐχμοῖς ἀλλὰ καὶ τῷ κατὰ καιρὸν γίνεσθαι καὶ ὕδατα καὶ πνεύματα καὶ ἀπλῶς τὰς τοῦ ἀέρος μεταβολάς. τὰ δὲ ἐν τοῖς ὄρεσιν ὡς ἀπλῶς εἶπεῖν καὶ ῥόδα καὶ ἴα καὶ τὰ ἄλλα «καλῶς μὲν ἀνθεῖν» τῇ δὲ ὁσμῇ πολλὰ χεῖρω γίνεσθαι. καὶ περὶ μὲν τῶν στεφανωματικῶν καὶ ἀπλῶς τῶν φρυγανικῶν σχεδὸν ἐν τούτοις καὶ τοῖς ὁμοίοις ἐστὶν ἡ ἱστορία.

Libër VII

[1] Ἐπόμενον δὲ τοῖς εἰρημένοις περὶ τῶν ποιωδῶν εἰπεῖν· τοῦτο γάρ ἐστι λοιπὸν τῶν ἐξ ἀρχῆς διαιρεθέντων γενῶν, ἐν ᾧ συμπεριλαμβάνονται πως τὸ λαχανηρὸν καὶ τὸ σιτωδες. καὶ πρῶτον περὶ τοῦ λαχανώδους λεκτέον ἀρξαμένους ἀπὸ τῶν ἡμέρων, ἐπεὶ γνώριμα μᾶλλον τυγχάνει τῶν ἀγρίων.

Εἰσὶ δὴ τρεῖς ἄροτοι πάντων τῶν κηπευομένων, ἐν οἷς ἕκαστα σπεύρουσι διαιροῦντες ταῖς ὥραις. εἷς μὲν οὖν ὁ χειμερινός, ἄλλος δὲ ὁ θερινός, τρίτος δὲ ὁ μεταξὺ τούτων μεθ' ἡλίου τροπᾶς [2] χειμερινᾶς. καλοῦσι δ' οὕτως οὐ πρὸς τὴν σπορὰν βλέποντες ἀλλὰ πρὸς τὴν γένεσιν καὶ τὴν χρεῖαν ἐκάστου· ἐπεὶ ἡ γε σπορὰ σχεδὸν ἐν τοῖς ἐναντίοις γίνεται. τοῦ χειμερινοῦ μὲν γὰρ ἀρχὴ μετὰ τροπᾶς θερινᾶς τοῦ Μεταγεινιῶνος μηνός, ἐν ᾧ σπεύρουσι ῥαφανὸν ῥαφανίδα γογγυλίδα καὶ τὰ καλούμενα ἐπίσπορα· ταῦτα δ' ἐστὶ τεύτλιον θριδακίνη εὐζωμον λάπαθον νᾶπυ κορίαννον ἄνηθον κάρδαμον· καλοῦσι δὲ καὶ πρῶτον τοῦτον τῶν ἀρότων. τοῦ δὲ δευτέρου πάλιν μεθ' ἡλίου τροπᾶς τοῦ Γαμηλιῶνος μηνός, ἐν ᾧ σπεύρουσι καὶ πηγνύουσι πράσον σέλινον γήθιον ἀδράφαξιν. τοῦ τρίτου δέ, ὃν καλοῦσι θερινόν, τοῦ Μουνυχιῶνος· ἐν τούτῳ δὲ σπεύρεται σίκυος κολοκύντη βλίτον ὠκιμον ἀνδράχην θύμβρον. ποιοῦνται δὲ πλείους ἀρότους τῶν ὁμοίων καθ' ἐκάστην ὥραν, οἷον ῥαφανίδος ὠκίμου τῶν ἄλλων. πᾶσι δὲ σπεύρεται τοῖς ἀρότοις τὰ ἐπίσπορα.

[3] Διαφύεται δ' οὐκ ἐν ἴσοις πάντα χρόνοις, ἀλλὰ τὰ μὲν θᾶπτον τὰ δὲ βραδύτερον ὅσα δυσφυῆ. τάχιστα μὲν οὖν ὠκιμον καὶ βλίτον καὶ εὐζωμον καὶ τῶν χειμερινῶν ῥαφανίς· τριταῖα γὰρ ὡς εἰπεῖν. θριδακίνα δὲ τεταρταῖα ἢ πεμπταῖα. σίκυος δὲ καὶ κολοκύντη περὶ τὰς πέντε ἢ ἕξ, οἱ δὲ φασιν ἑπτὰ· πρότερον δὲ καὶ θᾶπτον ὁ σίκυος. ἀνδράχην δ' ἐν πλείοσι τούτων. ἄνηθον δὲ τεταρταῖον. κάρδαμον δὲ καὶ νᾶπυ πεμπταῖα. τεύτλιον δὲ θέρους μὲν ἑκταῖον χειμῶνος δὲ δεκαταῖον. ἀδράφαξιν δὲ ὀγδοαῖα. ῥαφανὸς δὲ δεκαταῖα. πράσον δὲ καὶ γήθιον οὐκ ἐν ἴσοις, ἀλλὰ τὸ μὲν ἐννεακαδεκαταῖον ἐνιαχοῦ δὲ εἰκοσταῖον, γήθιον δὲ δεκαταῖον ἢ δωδεκαταῖον. κορίαννον δὲ δυσφύες· οὐδὲ γὰρ ἐθέλει βλαστάνειν τὸ νέον ἂν μὴ βρεχθῇ. θύμβρα δὲ καὶ ὀρίγανος ἐν πλείοσιν ἢ τριάκοντα. δυσφύεστατον δὲ πάντων τὸ σέλινον· τεσσαρακοσταῖον γὰρ φασιν οἱ τὰ συντομώτερα λέγοντες, οἱ δὲ πεντηκοσταῖον, καὶ τοῦτο κατὰ πάντα τοὺς ἀρότους· ἐπισπεύρουσι γάρ τινες ἐπὶ πᾶσιν.

[4] Ὅλως δὲ ὅσα κατὰ πλείους ὥρας σπεύρεται, ταῦτ' οὐδὲν θᾶπτον τέλεια γίνεται τοῦ θέρους. καὶ θαυμαστὸν εἰ καὶ μὴθὲν ἢ ὥρα συμβάλλεται καὶ ὁ ἀήρ

πρὸς τὸ θᾶττον, ἐὰν δὲ μοχθηρὰ καὶ ψυχρὰ καὶ τῷ ἀέρι περισκεπῆς βραδύτερον· ἐπεὶ καὶ χειμῶνων ἢ εὐδιῶν ἐπιγινομένων τοῖς ἀρότοις ὅτε μὲν βραδύτερον ὅτε δὲ θᾶττον ἢ βλάστησις· διαφέρει δὲ ταῦτα κατὰ τοὺς ἀρότους ἐκάστων· πρωΐαιτατον γὰρ ἐν τοῖς εὐείλοις καὶ εὐκρᾶσιν.

[5] Ὡς γὰρ ἀπλῶς εἰπεῖν ἐν πλείοσι δεῖ τὰς αἰτίας ὑπολαβεῖν τῶν τοιούτων, ἐν τε τοῖς σπέρμασιν αὐτοῖς καὶ ἐν τῇ χώρᾳ καὶ τῷ ἀέρι καὶ ταῖς ὥραις αἷς ἕκαστα σπεύρουσι καὶ χειμῶνων καὶ εὐδιῶν. ἀλλὰ τοῦτο μὲν σκεπτέον, ἐφ' ὧν τε παραλλάττουσιν οἱ χρόνοι καὶ ἐφ' ὧν οὐ· καὶ γὰρ τὴν ῥαφανίδα φασὶ τινες τριταίαν καὶ θέρους καὶ χειμῶνος, τὸ δὲ τεύτλιον, ὥσπερ εἴρηται, παραλλάττει κατὰ τὰς ὥρας. χρόνοι δ' οὖν οὗτοι τῆς βλαστήσεως εἰσι καὶ λέγονται καθ' ἕκαστον.

[6] Διαφέρει δὲ πρὸς τὸ θᾶττον καὶ βραδύτερον καὶ ἡ τῶν σπερμάτων παλαιότης. τὰ μὲν γὰρ ἀπὸ νέων παραγίνεται θᾶττον, οἷον πράσον γήθιον σίκυος κολοκύντη· ἔνιοι δὲ καὶ προβρέχουσι τὸν σίκυον πρὸς τὸ θᾶττον ἢ ἐν γάλακτι ἢ ἐν ὕδατι. τὰ δ' ἀπὸ παλαιῶν, οἷον σέλινον τεύτλιον κάρδαμον θύμβρα κορίαννον ὀρίγανον· εἴπερ μὴ «φυτεύεται» αὐτὰ ἀπὸ τοῦ νέου, καθάπερ εἵπομεν. ἴδιον δὲ φασιν ἐπὶ τοῦ τευτλίου συμβαίνειν· οὐ γὰρ διαφύεσθαι πᾶν εὐθὺς ἀλλ' ὕστερον πολλῶ, τὸ δὲ καὶ τῷ ἐχομένῳ ἔτει καὶ τῷ τρίτῳ, δι' ὃ καὶ ἐκ πολλοῦ σπέρματος ὀλίγον βλαστάνειν.

[7] Ἐκαστον δὲ τῶν σπερμάτων, ἐὰν ἀδρυνθέντα ἀποπέσῃ, διαμένει πρὸς τὴν ὥραν τὴν ἑαυτοῦ καὶ οὐ πρότερον ἐκβλαστάνει· καὶ κατὰ λόγον ἐστὶ· καὶ γὰρ ἐπὶ τῶν ἀγρίων ὁρῶμεν συμβαῖνον, ἐὰν μὴ φθαρῇ. αἱ δὲ τελειώσεις τῶν καρπῶν ἀπάντων γίνονται τοῦ θέρους, πρότερον δὲ καὶ θᾶττον ὡς ἀπλῶς εἰπεῖν τῶν πρότερον σπαρέντων. διαφέρει δὲ καὶ ἡ ὥρα· τὰ γὰρ ἐν ταῖς θερμομερίαις σπαρέντα θᾶττον ἐκκαυλεῖ καὶ ἐκσπερματοῦται, καθάπερ ῥαφανὶς γογγυλὶς. ἔνια δὲ οὐκ ἐνιαύσια φέρει τὸν καρπὸν ἀλλὰ δίενα, καθάπερ σέλινον πράσον γήθιον, ἃ καὶ διαμένει χρόνον πλείονα καὶ οὐκ ἔστιν ἐπέτεια· τὰ γὰρ πολλὰ τούτων ἅμα τῇ τελειώσει τῶν σπερμάτων αὐαίνεται.

[8] Πάντα δὲ ὡς εἰπεῖν ὅσα ἐκκαυλεῖ καὶ τελειοῖ τὸν καρπὸν ἀποτελειοῦται κατὰ τὸ σχῆμα τοῦ παραβλαστήσεις ἐκ τῶν καυλῶν ἔχειν ἀκρεμονικάς, πλην ὅσα μονόκαυλα, καθάπερ πράσον καὶ γήθιον καὶ κρόμυον καὶ σκόροδον.

Φύλδρα δὲ καὶ φιλόκοπρα πάντα, μᾶλλον δὲ τὰ ἀσθενέστερα καὶ πλείονος ἐπιμελείας δεόμενα, τὰ δὲ καὶ τροφῆς.

[2.1] Φύεται δὲ πάντα ἀπὸ τοῦ σπέρματος, ἔνια δὲ καὶ ἀπὸ παρασπάδος καὶ

κλωνὸς καὶ ῥίζης. ἀπὸ μὲν παρασπάδος ἢ ῥάφανος· δεῖ γάρ τι καὶ ῥιζῶδες προσλαβεῖν. ἀπὸ δὲ τῶν βλαστῶν πῆγανον ὀρίγανος ὠκιμον· ἀποφυτεύουσι γὰρ καὶ τοῦτο ὅταν σπιθαμιαῖον ἢ μεῖζον γένηται τεμόντες εἰς τὸ ἥμισυ. ἀπὸ ῥίζης δὲ σκόροδον καὶ κρόμμυον καὶ βολβὸς καὶ ἄρον καὶ ἀπλῶς τὰ τοιαῦτα τῶν κεφαλορρίζων. φύεται δὲ καὶ εἴ τινων αἱ ῥίζαι διαμένουσιν ἐπὶ πλείονα χρόνον ἐπετειοκαύλων ὄντων. ὅτι δὲ ἀπὸ σπέρματος πάντα βλαστάνει φανερόν· καὶ γὰρ τὸ πῆγανον, ὅπερ οὐ φασὶ τινες, ἀλλὰ βραδέως, δι' ὃ καὶ ἀποφυτεύουσιν.

[2] Ὅσα δὲ ἀπὸ ῥίζης φύεται, τούτων ἡ μὲν ῥίζα χρόνιος αὐτὰ δὲ ἐπετειόκαυλα, δι' ὃ καὶ παραβλαστάνουσιν αἱ ῥίζαι τῶν τοιούτων καὶ γίνονται πλείους οὐ μόνον ἐν τοῖς ἡμέροις καὶ κηπευομένοις ἀλλὰ καὶ ἐν τοῖς ἀγρίοις, ὥσπερ εἶπομεν, οἷον βολβοῖς γηθούις σκίλλαις καὶ τοῖς ἄλλοις. παραβλαστάνει δ' ἓναι καὶ τῶν μὴ κεφαλορρίζων χρονιωτέρων δέ, οἷον σέλινον καὶ τεύτλιον· ἀφιασι γὰρ ῥίζας ἀφ' ὧν φύονται φύλλα καὶ καυλοί. παραβλαστάνει δὲ καὶ γήθυον καὶ πράσον καὶ παραφύει κάτωθεν οἷον βολβώδη τινὰ κεφαλὴν, ἐξ ἧς ἡ βλάστησις γίνεται τῶν φύλλων, αὐανθέντος δὲ τοῦ καυλοῦ καὶ τοῦ σπέρματος ἀφαιρεθέντος· ἀλλὰ διὰ τὸ μὴ χρησίμας εἶναι τὰς τούτων κεφαλὰς οὐ συλλέγουσιν εἰς ξηρασίαν, δι' [3] ὃ καὶ οὐ φυτεύουσι. τάχα δὲ ταῦτα καὶ ὁμογενῇ καὶ σύνεγγύς πως τῇ τοῦ κρομύου φύσει, δι' ὃ καὶ οὐ θαυμαστόν. ἀλλ' ὁμοίως [καὶ] ἐπὶ πάντων καὶ ἡμέρων καὶ ἀγρίων, ὅσα χρονιώτερα μὲν ἐστὶν ἐπετειόκαυλα δέ, τούτων καὶ αἱ ῥίζαι ἐπιβλαστάνουσιν, ὥσπερ καὶ ἐπὶ τῶν φρυγανικῶν καὶ τῶν θαμνωδῶν· ἀλλ' ἐπὶ τῶν κρομύων καὶ σκορόδων καὶ βολβῶν καὶ ὥσπερ ἀριθμὸς τις γίνεται τούτων. ἡ δὴ γένεσις, ὥσπερ εἴρηται, τριχῶς ἐστὶν, ἀπὸ σπέρματος μὲν πάντων, ἀπὸ δὲ καυλοῦ καὶ ῥίζης τῶν εἰρημένων.

[4] Τῶν δὲ καυλῶν κολουσθέντων πάντα μὲν ὡς εἶπεῖν βλαστάνει πλήν τῶν ἀποκαύλων, ἐμφανέστατα δ' ὥσπερ καὶ εἰς χρεῖαν ὠκιμον θριδαξ ῥάφανος. καὶ τῆς μὲν θριδάκος ἡδίους φασὶ τοὺς παλιμβλαστεῖς εἶναι καυλοῦς· τὸν γὰρ πρῶτον ὀπώδη καὶ πικρὸν εἶναι ὡς ἄπεπτον· οἱ δὲ τὸ ἐναντίον ὀπωδεστέρους τούτους ἀλλ' ἕως ἂν ὧσιν ἀπαλοὶ φαίνεσθαι γλυκυτέρους. ἀλλ' ἐπὶ τῆς ῥαφάνου τοῦτο ὁμολογούμενον, ὡς εἰ πάλιν βλαστήσειεν ἡδίων ἀφαιρεθέντων γε τῶν φύλλων πρὸ τοῦ διακαυλίσαι.

[5] Διαμένουσιν δὲ αἱ ῥίζαι πλείονων, ἀλλ' αἱ μὲν βλαστάνουσιν πάλιν αἱ δὲ οὐ. ῥαφανὶς γοῦν καὶ γογγυλὶς διαμένουσιν γῆς ἐπιβληθείσης ἄχρῃ θέρους καὶ αὐξησιν λαμβάνουσιν, ὅπερ ποιουσί τινες ἐξεπίτηδες τῶν κηπουρῶν· οὐ

βλαστάνουσι δὲ οὐδ' ἀφιάσι φύλλον οὐδ' εἴ τις ἀφέλοι τὴν ἐπισεσαγμένην γῆν. ἰδεῖν δὲ τοῦτο καὶ ἐπὶ τῶν ἄλλων ἐστί. τὰ δὲ πλεῖστα τῶν λαχάνων μονόρριζα τῇ παχείᾳ κατὰ βάθους ρίζῃ· καὶ γὰρ ὅσα παραφύει τὰς ἰσοπαχεῖς ταύτας, ὥσπερ σέλινον καὶ τεύτλιον, ἀπὸ τῆς μέσης πως ἢ παράφυσίς ἐστι καὶ οὐκ εὐθὺς ἀπὸ τῆς ἀρχῆς ἢ σχίσις· ἐκ δὲ ταύτης τῆς μιᾶς ἀπήρτηνται αἱ ἀποφυάδες αἱ μικραὶ καὶ τῆς ραφανίδος καὶ τῆς γογγυλίδος. καὶ αὗται μὲν δὴ πᾶσι φανεραὶ διὰ τὴν χρεῖαν.

[6] Ἡ δὲ τοῦ τευτλίου μία μὲν μακρὰ καὶ παχεῖα καὶ ὀρθή, καθάπερ ἡ τῶν ραφανίδων, ἀποφύσεις δὲ ἔχει παχείας ὅτε μὲν δύο ὅτε δὲ καὶ τρεῖς ὅτε δὲ καὶ μίαν, τὰς δὲ μικρὰς ἐκ τούτων. σαρκώδης δὲ ἡ ρίζα καὶ τῇ γεύσει γλυκεῖα καὶ ἡδεῖα, δι' ὃ καὶ ὠμὴν ἐσθίουσί τινες· ὁ δὲ φλοιὸς οὐ παχὺς οὐδὲ ἀφαιρετός, ὥσπερ ὁ τῶν ραφανίδων, ἀλλὰ μᾶλλον οἶος ὁ τῶν ἵπποσελίνων. ὡσαύτως δὲ καὶ ἡ τῆς ἀδραφάξυος μία μὲν εἰς βάθος ἐκ ταύτης δὲ ἄλλαι.

[7] Μονορριζότατον δὲ τούτων πάντων τὸ λάπαθον· οὐ γὰρ ἔχει παχείας ἀποφύσεις ἀλλὰ τὰς λεπτὰς· βαθυρριζότατον δὲ πάντων, ἔχει γὰρ μείζω τριῶν ἡμιποδίων· τὸ δ' ἄγριον βραχυτέραν, πολύκαυλον δὲ καὶ πολύκλαδον καὶ ἡ ὅλη μορφή τελειωθεῖσα παραπλησία τῇ τοῦ τευτλίου· πολυχρονιώτερον δὲ καὶ τοῦ ἀγρίου καὶ ὅλως δὲ πάντων τῶν λαχάνων ὡς εἰπεῖν· διαμένει γὰρ ὅποσονοῦν χρόνον ὥς φασιν. ἔχει δὲ σαρκώδη τὴν ρίζαν καὶ ἔνικμον, δι' ὃ καὶ ἐξαιρεθεῖσα ζῆ πολλὸν χρόνον.

Τὸ δ' ὠκίμον μίαν μὲν τὴν παχεῖαν τὴν κατὰ βάθους τὰς δ' ἄλλας τὰς ἐκ πλαγίου λεπτὰς ἐπεικῶς εὐμήκεις.

Ἔνια δ' οὐκ ἔχει τὴν μίαν τὴν ὀρθήν, οἷον τὸ βλίτον, ἀλλ' εὐθὺ πολλὰς ἐξ ἄκρου καὶ εὐπαχεῖς καὶ μακροτέρας τῆς ἀδραφάξυος.

[8] Τῶν δὲ ριζῶν ξυλωδέσταται πασῶν αἱ τοῦ ὠκίμου, καθάπερ καὶ ὁ καυλός. ἡ γὰρ τοῦ βλίτου καὶ τῆς ἀδραφάξυος καὶ τῶν τοιούτων ἦττον ξυλώδης. εἰσὶ γὰρ ὡς ἀπλῶς εἰπεῖν πασῶν αἱ μὲν σαρκώδεις αἱ δὲ ξυλώδεις. <σαρκώδεις>, οἷον ἡ τοῦ τευτλίου καὶ τοῦ σελίνου καὶ ἵπποσελίνου καὶ λαπάθου καὶ ραφανίδος καὶ γογγυλίδος καὶ πάντων μάλιστα τῶν κεφαλοβαρῶν· οὐδὲ γὰρ ἀναξηραινόμεναι σκληρύνονται τελείως. ξυλώδεις δέ, ὥσπερ αἱ τοῦ ὠκίμου καὶ βλίτου καὶ ἀδραφάξυος καὶ εὐζώμου καὶ ἀνήθου [καὶ λαπάθου] καὶ κοριάννου καὶ ἀπλῶς τῶν νευροκαύλων· ἔχει γὰρ δὴ καὶ τὸ ἄνηθον καὶ τὸ κοριάννον ὄντα μονόρριζα ξυλώδη τε τὴν ρίζαν καὶ οὐ μακρὰν οὐδὲ τὰς λεπτὰς ἀποφυάδας ἔχουσιν πολλὰς· πολύκαυλα δὲ ἄμφω καὶ πολύοζα, δι' ὃ καὶ οὐ κατὰ λόγον οὐδενὶ τούτων τὸ ἄνω πρὸς τὸ κάτω.

[9] Βραχύρριζα δὲ ταῦτά ἐστιν, οἷον θριῖδαξ ἀνδράχνη, τῇ ὀρθῇ καὶ ταῖς εἰς τὰ πλάγια. ἡ δὲ θριῖδαξ, ὥσπερ οὐκ ἔχει τὰς τοιαύτας ἀποφύσεις ἀλλὰ μόνον τὰς λεπτὰς, καὶ μάλιστα δὴ μονόρριζον ὡς εἰπεῖν. ἀπλῶς δὴ πάντα τὰ θερινὰ βραχύρριζα· καὶ γὰρ ὁ σίκυος καὶ ἡ κολοκύνθη καὶ ἡ σικύα καὶ διὰ τὴν ὥραν καὶ ἴσως ἔτι μᾶλλον διὰ τὴν φύσιν, ἥπερ συνηκολούθηκε τῇ ὥρᾳ. ἡ δὲ μεταφυτευομένη θριῖδαξ βραχυτέραν ἔχει τὴν ρίζαν τῆς σπαρείσης· παραβλαστάνει γὰρ ἐκ τῶν πλαγίων μᾶλλον· βραχυτέραν δὲ καὶ ἡ ἀγρία τῆς ἡμέρου, καὶ ἐκ τῶν ἄνωθεν πολυκαυλότερα.

[3.1] Ἄνθει δὲ τῶν μὲν ἄλλων ἕκαστον ἀθρόον, τὸ δὲ ὤκιμον κατὰ μέρος, τὰ κάτω πρῶτον εἶθ' ὅταν ταῦτα ἀπανθήσῃ τὰ ἄνω, δι' ὃ καὶ πολυχρόνιον ἐν τῷ ἀνθεῖν, καθάπερ κύαμος καὶ τῆς πόας τὸ ἡλιοτρόπιον καλούμενον καὶ ἄλλα δὲ τῶν ἀγρίων. ἀνθεῖ δὲ καὶ ὁ σίκυος πολὺν χρόνον· καὶ γὰρ ἐπιβλαστάνειν τούτῳ γε συμβαίνει. τὰ δὲ ἄνθη τῶν μὲν ἔκλευκα τῶν δὲ μηνιοειδῆ τῶν δὲ μικρὸν ἐπιποφυρίζοντα, εὐχρουν δ' οὐθέν.

[2] Τὰ δὲ σπέρματα διαφέρει καὶ τοῖς σχήμασι· τὰ μὲν γὰρ πλεῖστα στρογγύλα τὰ δὲ προμήκη τὰ δ' αὖ πλατέα καὶ φυλλώδη, καθάπερ τὰ τῆς ἀδραφάξους· ὅμοιον γὰρ τῷ τοῦ σιλφίου· τὰ δὲ στενὰ καὶ γραμμώδη, καθάπερ τοῦ κυμίνου. καὶ τοῖς χρώμασιν ὁμοίως, τὰ μὲν μέλανα τὰ δὲ ξυλώδη τὰ δὲ λευκότερα. πάντα δὴ ἐλλοβοσπέρματα ἢ γυμνοσπέρματα ἢ ἐμφλοιοσπέρματα ἢ παπποσπέρματα· ῥαφανὶς μὲν γὰρ καὶ νᾶπυ καὶ γογγυλὶς ἐλλοβοσπέρματα, κορίαννον δὲ καὶ μάραθον καὶ ἄνηθον καὶ κύμινον γυμνοσπέρματα, βλίτον δὲ καὶ τεύτλιον καὶ ἀδράφαξος καὶ ὤκιμον ἐμφλοιοσπέρματα, θριδακίνη δὲ παπποσπέρματον.

[3] Πάντα δὲ πολύκαρπα καὶ πολυβλαστῇ, πολυκαρπότερον δὲ τὸ κύμινον. ἴδιον δὲ καὶ ὃ λέγουσι κατὰ τούτου· φασὶ γὰρ δεῖν καταρᾶσθαι τε καὶ βλασφημεῖν σπεύροντας, εἰ μέλλει καλὸν ἔσσεσθαι καὶ πολὺ.

Δυσζήραντα δὲ πάντα μὲν ὡς εἰπεῖν πλὴν τοῦ κυμίνου, οὐχ ὡς ὁ σῖτος· οὗτος γὰρ κἄν ἅπαξ ἀδρυνθῇ ταχὺ ξηραίνεται καὶ ἀποπίπτει· δυσζηραντότερα δὲ τὰ ἐμφλοιοσπέρματα καὶ τούτων [4] «μάλιστα τὸ ὤκιμον. ἅπαντα δὲ ξηρανθέντα πολυκαρπότερα γίνεται, δι' ὃ» καὶ προαφαιροῦντες αὐτὰ ξηραίνουσιν. ἅπαντα δὲ πολύχοα καὶ πολυσπέρματα, πολυκαρπότερον δὲ τὸ ὤκιμον.

Ἔστι δὲ τὰ μὲν ἀκρόκαρπα, καθάπερ ὤκιμον πρᾶσον κρόμινον· τὰ δὲ πλαγιόκαρπα μᾶλλον, οἷον ῥαφανὶς γογγυλὶς καὶ τὰ τοιαῦτα· τὰ δ' ἀμφοτέρως, οἷον βλίτον ἀδράφαξος· ἀμφοτέρα γὰρ ταῦτα καὶ ἐκ τοῦ πλαγίου,

καὶ τὸ γε βλίτον εὐθὺς παρ' ἑκαστον ὄζον προσκαθήμενον ἔχει τὸ σπέρμα βοτρυῶδες. τὰ δ' ἐκ παλαιότερων σπερμάτων θάπτον ἐκκαυλεῖ, τάχιστα δὲ τὰ ἐκ τῶν ἀκμαζόντων· ἔστι γάρ τις ἀκμή καὶ τούτων. ἀνὰ λόγον δὲ καὶ τὸ κάλλος ἀκολουθεῖ τῶν ... ἐὰν τὰ ἄλλα τὴν αὐτὴν ἔχῃσι θεραπείαν.

Δοκεῖ δὲ καὶ εἰς τὸ αὐτὸ ἀθρόα θεμένων καλλίω γίνεσθαι καὶ βλαστάνειν· οὕτω γὰρ τὸ τοῦ πράσου καὶ τὸ τοῦ σελίνου τιθέασιν ἀποδήσαντες εἰς ὀθόνιον καὶ γίνονται μεγάλα.

[5] Συμβάλλεται δὲ τι καὶ ὁ τόπος πρὸς αὐξησιν· κελεύουσι γοῦν, ὅταν τις μεταφυτεύῃ τὰ σέλινά, πάτταλον κατακρούειν ἡλίκον ἂν βούληται ποιεῖν τὸ σέλινον· τιθέναι δὲ καὶ ἐν ὀθονίῳ πάτταλον κατακρούσαντα καὶ πλήσαντα κόπρου καὶ γῆς.

Ἔνια δὲ καὶ τοῖς σχήμασιν ἐξομοιοῦνται καὶ τοῖς τόποις· ἡ γὰρ σικύα ὁμοιοσχήμων γίνεται ἐν ᾧ ἂν τεθῇ ἀγγεῖω.

Καὶ διαφορὰν λαμβάνει κατὰ τοὺς χυμοὺς ἔνια προθεραπευθέντα τῶν σπερμάτων, οἷον τὸ τοῦ σικύου ἐὰν ἐν γάλακτι βρέξαντες σπείρωσιν. ἄλλα τὰ μὲν τοιαῦτα ἴσως οἰκειότερα τῆς θεραπείας.

[4.1] Γένη δὲ τῶν μὲν ἔστι πλείω τῶν δ' οὐκ ἔστιν, οἷον ὠκίμου λαπάθου βλίτου καρδάμου εὐζώμου ἀδραφάξυος κοριάννου ἀνήθου πηγάνου· τούτων γὰρ οὗ φασιν εἶναι <γένους διαφοράν.> τῶν δὲ ἔστι, ῥαφανίδος ῥαφάνου τευτλίου σικύου κολοκύντης κυμίνου σκορόδου θριδακίνης. διαιροῦσι δὲ τοῖς τε φύλλοις καὶ ταῖς ρίζαις καὶ τοῖς χρώμασι καὶ τοῖς χυλοῖς καὶ τοῖς ἄλλοις τοιοῦτοις.

[2] Οἷον τῆς ῥαφανίδος <γένη Κορινθίαν Κλεωναίαν Λειοθασίαν> ἀμωρέαν Βοιωτίαν· εὐαυξεστάτην δὲ τὴν Κορινθίαν, ἥ καὶ τὴν ρίζαν ἔχει γυμνήν· ὠθεῖται γὰρ εἰς τὸ ἄνω καὶ οὐχ ὥς αἱ ἄλλαι κάτω. τὴν δὲ Λειοθασίαν, ἣν ἔνιοι καλοῦσι Θρακίαν, ἰσχυροτάτην πρὸς τοὺς χειμῶνας. τὴν δὲ Βοιωτίαν γλυκυτάτην καὶ τῷ σχήματι στρογγύλην, οὐχ ὥσπερ τὴν Κλεωναίαν μακράν. ὅσων δ' ἂν ἦ λεῖα τὰ φύλλα, γλυκύτεραι καὶ ἡδίους, ὅσων δ' ἂν τραχέα, δριμύτεραι. γένος δὲ τι παρὰ ταῦτα ἔστιν ὃ ἔχει τὸ φύλλον εὐζώμῳ ὅμοιον. ῥαφανίδος μὲν οὖν ταῦτα.

[3] Γογγυλίδος δὲ οἱ μὲν φασιν εἶναι οἱ δ' οὐ φασιν, ἀλλὰ τῷ ἄρρενι καὶ τῇ θηλείᾳ διαφέρειν, γίνεσθαι δὲ ἐκ τοῦ αὐτοῦ σπέρματος ἄμφω. πρὸς δὲ τὸ ἀποθηλύνεσθαι πηγνύναι δεῖν μανάς· ἐὰν γὰρ πυκνάς, πάσας ἀπαρρενοῦσθαι, τὸν αὐτὸν δὲ τρόπον κἂν ἐν γῇ μοχθηρᾷ σπαρῶσι· δι' ὃ καὶ πρὸς σπερματισμὸν μεταφέροντες φυτεύουσι τὰς ἐκφύσεις καὶ πλατείας. ἔστι δὲ

καὶ τὸ σπέρμα τῇ ὄψει τὸ χειρὸν καὶ βέλτιον φανερόν· τῆς μὲν γὰρ χρηστῆς λεπτόν τῆς δὲ μοχθηρᾶς ἄδρόν. χειμαζομένη δὲ χαίρει καὶ αὕτη καὶ ἡ ῥαφανίς· οἶονται γὰρ ἅμα γλυκαίνεσθαι τε καὶ τὴν αὔξησιν εἰς τὴν ρίζαν τρέπεσθαι καὶ οὐκ εἰς τὰ φύλλα. τοῖς δὲ νοτίοις καὶ ταῖς εὐδίαῖς ἐκκαυλεῖ ταχύ. τοῦτο μὲν οὖν λόγου δεῖται τῆς ὁμοιώσεως ἐν ἀμφοῖν εἶναι τὰς διαφοράς.

[4] Τῆς δὲ ῥαφάνου τριχῇ διαιρουμένης, οὐλοφύλλου τε καὶ λειοφύλλου καὶ τρίτης τῆς ἀγρίας, ἡ ἀγρία· τὸ μὲν φύλλον ἔχει λεῖον μικρὸν δὲ καὶ περιφερές, πολύκλαδος καὶ πολύφυλλος, ἔτι δὲ χυλὸν ἔχουσα δριμύν καὶ φαρμακώδη, δι' ὃ καὶ πρὸς τὰς κοιλίας αὐτῷ χρῶνται οἱ ἱατροί. ὁμοίως δὲ καὶ ἐν ἐκείναις δοκοῦσι διαφοραὶ καθ' ἑκατέραν· ἐπεὶ ἄσπερμόν τι γένος αὐτῶν ἐστὶν ἢ κακὸςπερμόν. τὸ δ' ὅλον ἢ οὐλὴ τῆς λείας εὐχυλοτέρα καὶ μεγαλοφυλλοτέρα.

Εὐχυλοτέρον δὲ καὶ τῶν τευτλίων τὸ λευκὸν τοῦ μέλανος καὶ ὀλιγοσπερμότερον, ὃ καλοῦσι τινες Σικελικόν.

[5] Ὡσαύτως δὲ καὶ τῆς θριδακίνης· ἡ γὰρ λευκὴ γλυκυτέρα καὶ ἀπαλωτέρα. γένη δὲ αὐτῆς ἐστὶν ἄλλα τρία, τό τε πλατύκαυλον καὶ στρογγυλόκαυλον καὶ τρίτον τὸ Λακωνικόν· αὕτη δὲ τὸ μὲν φύλλον ἔχει σκολυμῶδες, ὀρθὴ δὲ καὶ εὐαυξὴς καὶ ἀπαράβλαστος ἐκ τοῦ καυλοῦ. τῶν δὲ πλατειῶν οὕτω τινὲς πλατύκαυλοι γίνονται ὥστ' ἐνίους φασὶ καὶ θύραις χρῆσθαι κηπουρικαῖς. τὸ δὲ ὀπῶδες σφόδρα καὶ μικρόφυλλον καὶ λευκοκαυλοτέρον ἔοικεν ἀγρίᾳ.

[6] Τῶν δὲ σελίνων καὶ ἐν τοῖς φύλλοις καὶ ἐν τοῖς καυλοῖς αἱ διαφοραὶ· τὸ μὲν γὰρ πυκνὸν καὶ οὐλὸν καὶ δασὺ τὸ φύλλον ἔχει, τὸ δὲ μανότερον καὶ πλατύτερον καυλὸν δὲ μεῖζω. τούτων δὲ πάλιν τὰ μὲν λευκόκαυλα τὰ δὲ πορφυρόκαυλα ἢ ποικιλόκαυλα· τὸ δ' ὅλον ἅπαν τὸ τοιοῦτον ἐμφερέστερον τῷ ἀγρίῳ.

Σικύου δὲ καὶ κολοκύντης τοῦ μὲν εἶναί φασι γένη τῆς δ' οὐκ εἶναι, καθάπερ τῆς ῥαφανίδος καὶ τῆς γογγυλίδος, ἀλλ' ἐν τῷ αὐτῷ γένει τὰς μὲν βελτίους τὰς δὲ χειρούς. τοῦ δὲ σικύου τρία, Λακωνικὸν σκυταλίαν Βοιωτίον· τούτων δὲ ὁ μὲν Λακωνικὸς ὑδρευόμενος βελτίων, οἱ δ' ἕτεροι ἀνύδρευτοι.

[7] Διαφέρει δὲ γένει καὶ τὰ κρόμυα καὶ τὰ σκόροδα. πλείω δὲ τοῦ κρομύου τὰ γένη, οἷον τὰ κατὰ τὰς χώρας ἐπικαλούμενα Σάρδια Κνίδια Σαμοθράκια, καὶ πάλιν τὰ σητάνια καὶ σχιστὰ καὶ Ἀσκαλῶνια. τούτων δὲ τὰ μὲν σητάνια μικρὰ γλυκέα δὲ εὖ μάλα, τὰ δὲ σχιστὰ καὶ ἀσκαλῶνια καὶ ταῖς θεραπαίαις διαφέροντα καὶ δῆλον ὅτι τῇ φύσει· τὸ γὰρ σχιστὸν τῷ μὲν χειμῶνι μετὰ τῆς κόμης ἐῷσιν ἄργόν, ἅμα δὲ τῷ ἥρι τὰ φύλλα περιαιροῦσι τὰ ἔξω καὶ τὰ ἄλλα

θεραπεύουσι· περιαιρεθέντων δὲ τῶν φύλλων ἕτερα βλαστάνει καὶ ἅμα κάτω σχίζεται, δι' ὃ καλοῦσι σχιστά. οἱ δὲ καὶ ὅλως φασὶ πάντων δεῖν, ὅπως ἡ δύναμις εἰς τὸ κάτω καὶ μὴ σπερμοφυῇ.

[8] τῶν δὲ Ἀσκαλωνίων ἰδία τις ἡ φύσις· μόνα γὰρ <οὐ> σχιστὰ καὶ ὥσπερ ἄγωνα ἀπὸ τῆς ρίζης, ἔτι δὲ ἐν αὐτοῖς ἀναυξῇ καὶ ἀνεπίδοτα· δι' ὃ καὶ οὐ πηγνύουσιν ἀλλὰ σπείρουσιν αὐτὰ καὶ σπείρουσιν ὅπῃ πρὸς τὸ ἔαρ, εἴθ' ὅταν βλαστήσῃ μεταφυτεύουσι· τελειοῦται δὲ οὕτω ταχέως ὥσθ' ἅμα τοῖς ἄλλοις ἢ καὶ πρότερον ἐξαίρεισθαι· πλέονα δὲ χρόνον ἐαθέντα ἐν τῇ γῇ σήπεται· φυτευθέντα δὲ καυλὸν ἀφήσι καὶ σπέρμα φύει μόνον, εἴτα κενοῦται καὶ αὐαίνεται. τούτων μὲν οὖν τοιαύτη τις ἡ φύσις.

[9] Διαφέρει δ' ἓν καὶ τοῖς χρώμασιν· ἐν Ἰσσοῦ γὰρ τὰ μὲν ἄλλα ὅμοια τοῖς ἄλλοις, λευκὰ δὲ σφόδρα τῇ χροίᾳ· φέρειν δὲ φασιν ὅμοια τοῖς Σαρδιανοῖς. ἰδιωτάτη δὲ ἡ φύσις ἢ τῶν Κρητικῶν, παραπλησία δὲ τρόπον τινὰ τοῖς Ἀσκαλωνίοις, εἰ μὴ ἄρα καὶ ἡ αὐτή. ἐν Κρήτῃ γὰρ ἐστὶ τι γένος ὃ σπειρόμενον μὲν ρίζαν ποιεῖ φυτευόμενον δὲ καυλὸν καὶ σπέρμα, κεφαλὴν δὲ οὐκ ἴσχει, γλυκὺ δὲ τῷ χυμῷ· τοῦτο γὰρ οἶον ἀνάπαλιν ἔχει τοῖς [10] ἄλλοις. ἅπαντα γὰρ πηγνύμενα καὶ βελτίω καὶ θάπτον παραγίνεται. πάντα δὲ φυτεύεται μετ' Ἀρκτοῦρον ἔτι θερμῆς οὔσης τῆς γῆς, ὅπως τὰ ὕδατα πεφυτευμένα καταλαμβάνη. καὶ ὅλα δὲ φυτεύεται καὶ διατεμνόμενα παρὰ τὴν κεφαλὴν. οὐχ ὅμοια δὲ αἱ ἐκβλαστήσεις, ἀλλ' ἐκ μὲν τοῦ κάτω γίνεται κρόμυον, ἐκ δὲ τοῦ ἄνω χλόη μόνον· ὀρθὸν δὲ διατμηθὲν ὅλως ἀβλαστὲς ἐστί. τὸ δὲ γήτειον καλούμενον ἀκέφαλόν τι καὶ ὥσπερ αὐχένα μακρὸν ἔχον, ὅθεν καὶ ἡ βλάστησις ἄκρα· καὶ ἐπικεῖρεται πολλάκις, ὥσπερ τὸ πρᾶσον, δι' ὃ καὶ σπείρουσιν αὐτὸ καὶ οὐ φυτεύουσι. τὰ μὲν οὖν κρόμυα σχεδὸν ταύτας ἔχει τὰς ιδέας.

[11] Τὸ δὲ σκόροδον φυτεύεται μὲν μικρὸν πρὸ τροπῶν ἢ μετὰ τροπὰς διαιρούμενον κατὰ γέλεις. διαφορὰ δὲ ἐστὶν αὐτῶν ἢ τε τῶν ὀψίων πρὸς τὰ πρῶϊα· γένος γάρ τι τυγχάνει τοιοῦτον ὃ ἐν ἐξήκοντα ἡμέραις τελειοῦται, καὶ μεγέθει καὶ μικρότητι. καὶ τῷ μεγέθει γένος τι διάφορόν ἐστι, μάλιστα δὲ τὸ Κύπριον καλούμενον τοιοῦτον, ὅπερ οὐχ ἐψοῦσιν ἀλλὰ πρὸς τοὺς μυττωτοὺς χρῶνται, καὶ ἐν τῇ τρίψει θαυμαστὸν ποιεῖ τὸν ὄγκον ἐκπνευματούμενον. καὶ ἔτι τῷ μὴ ἔχειν ἓν τὰς γέλεις. ἢ δὲ γλυκύτης καὶ ἡ εὐωδία καὶ ἡ ἀδρότης σχεδὸν παρὰ τὰς χώρας γίνεται καὶ τὰς θεραπείας, ὥσπερ καὶ τῶν ἄλλων. τελειοῦται δὲ καὶ ἀπὸ σπέρματος ἀλλὰ βραδέως· τῷ πρώτῳ γὰρ ἔτει κεφαλὴν ἡλικὴν πρᾶσου λαμβάνει, τῷ δ' ὕστερον γελγιδοῦται, καὶ τῷ τρίτῳ τέλειον

γίνεται, καὶ οὐδὲν χειρὸν ἄλλ' ἐνιοί γε [12] καὶ κάλλιόν φασι τοῦ πηκτοῦ. τῆς δὲ ρίζης ἢ γένεσις οὐχ ὁμοία τοῦ τε σκορόδου καὶ τοῦ κρομύου· ἀλλὰ τοῦ μὲν σκορόδου ὅταν ἀνοιδήσῃ ἢ γελγίς κυρτοῦται πᾶσα καὶ ἐνταῦθα αὐξηθεῖσα διαιρεῖται πάλιν εἰς τὰς γέλγεις καὶ ἐξ ἐνὸς πολλὰ γίνεται τῷ τελειοῦσθαι τὴν κεφαλὴν, τὸ δὲ κρόμυον εὐθὺς ἐκ τῆς ρίζης ἄλλο καὶ ἄλλο παραφίησι, καθάπερ καὶ βολβοὶ καὶ σκύλλα καὶ πάντα τὰ τοιαῦτα. καὶ γὰρ τὰ κρόμυα καὶ τὰ σκόροδα μὴ ἀναιρουντων ἄλλ' ἐόντων πολλὰ γίνεται. φέρειν δὲ φασι καὶ τὸ σκόροdon ἐπὶ τῆς φύσιγγος σκόροδα καὶ τὸ κρόμυον κρόμυα· περὶ μὲν οὖν τῶν γενέσεων ἱκανῶς εἰρήσθω.

[5.1] Φύλδρα δὲ πάντα τὰ ἄλλα λάχανα καὶ φιλόκοπρα πλὴν πηγάνου, τοῦτο δὲ ἥκιστα φιλόκοπρον. τὰ χειμερινὰ δὲ οὐχ ἦττον τῶν θερινῶν καὶ τὰ ἐπίκηρα τῶν ἰσχυρῶν. κόπρον δὲ μάλιστα ἐπαινοῦσι τὴν συρματῖτιν, τὴν δὲ τῶν ὑποζυγίων μοχθηρὰν διὰ τὸ μάλιστα ἐξικμάζεσθαι· ζητοῦσι δὲ τὴν κόπρον ἅμα τῷ σπόρῳ μάλιστα συναναμιχθεῖσαν· οἱ δὲ καὶ σπείροντες ἐπιβάλλουσι· χρῶνται δὲ καὶ τῇ ἀνθρωπίνῃ ὥμῃ πρὸς τὴν χύλωσιν. φυλδρότερα δὲ τὰ χειμερινὰ τῶν θερινῶν καὶ τὰ ἀσθενῇ τῶν ἰσχυρῶν, ἔτι δὲ τὰ πλείστης δεόμενα τροφῆς. φύλδρα καὶ τὸ κρόμυον καὶ τὸ γήθουν· καίτοι φασὶ τινες οὐ ζητεῖν, ἐὰν τὸ πρῶτον ἐπιγένηται δις ἢ τρίς.

[2] τῶν δὲ ὑδάτων ἄριστα τὰ πότιμα καὶ τὰ ψυχρά, χειρίστα δὲ τὰ ἀλυκὰ καὶ δυσμανῆ, δι' ὃ καὶ ἐκ τῶν ὀχετῶν οὐ χρηστά· συμπεριφέρει γὰρ σπέρματα πόας. ἀγαθὰ δὲ τὰ ἐκ διός· ταῦτα γὰρ δοκεῖ καὶ φθεῖρειν τὰ θηρία [γινόμενα] τὰ γόνιμα κατεσθίοντα. φασὶ δὲ τινες οὔτε τοῖς σικύοις συμφέρειν οὔτε τοῖς κρομύοις. ἀρδεύουσι δὲ τὰ μὲν ἄλλα πρῶτ' ἢ πρὸς ἐσπέραν, ὅπως μὴ καθέψηται, τὸ δὲ ὠκιμον καὶ μεσημβρίας· καὶ γὰρ διαβλαστάνειν θάπτον φασι θερμῷ τὸ πρῶτον ἀρδευόμενον. τὸ δὲ πολὺ λίαν ὕδωρ δοκεῖ συμφέρειν ἄλλως τε καὶ ἐὰν [μὴ] ἔχῃ κόπρον· πολλάκις γὰρ πεινῇ τὰ λάχανά φασι, καὶ ταῦτα γνωρίζειν τοὺς ἐμπείρους τῶν κηπουρῶν.

[3] Μεταφυτεύμενα δὲ πάντα καλλίω καὶ μείζω γίνεται· καὶ γὰρ τὰ τῶν πράσων μεγέθη καὶ τὰ τῶν ῥαφανίδων ἐκ μεταφυτείας. μάλιστα δὲ μεταφυτεύουσι πρὸς τοὺς σπερματισμούς· καὶ τὰ μὲν ἄλλα ὑπομένει, οἷον γήθουν πράσον ῥαφανος σίκυος σέλινον γογγυλὶς θριδαξ, «τὰ δὲ» γλίσχρους. ἅπαντα δ' εὐαυξέστερα καὶ μείζω πηγνυμένων τῶν σπερμάτων ἢ σπειρομένων.

[4] Θηρία δὲ γίνεται ταῖς μὲν ῥαφανῖσι ψύλλαι, τῇ δὲ ῥαφάνῳ κάμπαι καὶ σκώληκες, καὶ ἐν τῇ θριδακίνῃ καὶ ἐν τοῖς πράσοις καὶ ἐν ἄλλοις δὲ πλείοσιν

αἱ πρασοκουρίδες. ταύτας μὲν οὖν ἢ κράστις ἀθροισθεῖσα ἀπόλλυσι καὶ ὅταν κόπρος ἀθρόα που καταλάβῃ· φιλόκοπρον δ' ὃν τὸ θηρίον ἀναδύεται καὶ ἐνδύσα κοιμᾶται ἐν τῇ κόπρῳ, δι' ὃ δὴ ῥάδιον θηρεύειν· ἄλλως δ' οὐκ ἔστι. ταῖς δὲ ῥαφανῖσι πρὸς τὰς ψύλλας πρόσφορον τὸ ἐπισπείρειν ὀρόβους. πρὸς δὲ τὸ μὴ γίνεσθαι ψύλλας οὐ φασιν εἶναι φάρμακον οὐδέν. ὑπὸ δὲ τὸ ἄστρον ὤκιμον μὲν λευκαίνεται κορίαννον δὲ ἀλμᾶ. τὰ μὲν οὖν συμβαίνοντα διὰ τούτων θεωρητέον.

[5] Τῶν δὲ σπερμάτων τὰ μὲν ἐστὶν ἰσχυρότερα τὰ δὲ ἀσθενέστερα πρὸς διαμονήν· ἰσχυρότερα μὲν οἷον κορίαννον τεύτλιον πράσον κάρδαμον νᾶπυ εὐζωμον θύμβρα, ἀπλῶς τὰ δριμέα πάντα· ἀσθενέστερα δὲ γήθουν, τοῦτο γὰρ οὐκ ἐθέλει μένειν, ἀδράφαξυς ὤκιμον κολοκύντη σίκυος, ἀπλῶς τὰ θερινὰ τῶν χειμερινῶν μᾶλλον. διαμένει δὲ οὐδὲν πλέον τεττάρων ἐτῶν ὥστε ἔτι χρήσιμον εἶναι πρὸς τοὺς σπόρους· ἀλλὰ διένα μὲν βελτίω, τὰ δὲ τριένα οὐδὲν χεῖρω, τὸ δ' ὑπερτεῖνον ἤδη χεῖρον.

[6] Πρὸς δὲ τὴν μαγειρικὴν χρεῖαν ἐπὶ πλείω διαμένει, πλὴν ἀσθενέστερα ταῦτα ἀναγκαῖον εἶναι διὰ τὴν ἀναπνοὴν καὶ τὴν σκωλήκωσιν. φθορὰ δὲ μάλιστα μὲν ὑπὸ τῶν θηρίων· γίγνεται γὰρ ἐν ἅπασι καὶ τοῖς δριμέσιν, ἥκιστα δὲ ἐν τῷ σικυῶνι· οὐ μὴν ἀλλὰ καὶ ἐξικμαζόμενα πικρὰ γίνεται τῇ γεύσει, δι' ὃ καὶ πρὸς τὴν χρεῖαν χεῖρω. καὶ περὶ μὲν τῶν σπερμάτων καὶ ἀπλῶς τῶν κηπευομένων ἱκανῶς εἰρήσθω.

[6.1] Περὶ δὲ τῶν ἀγρίων καὶ τῶν καλουμένων ἀρουραίων πειρατέον ὁμοίως εἰπεῖν. τυγχάνει δὲ τὰ μὲν ὁμώνυμα τοῖς ἡμέροις· ἅπαντα γὰρ ἐστὶ τὰ γένη ταῦτα καὶ ἄγρια, καὶ σχεδὸν τὰ γε πολλὰ παραπλησίαν ἔχοντα τὴν ὄψιν τοῖς ἡμέροις, πλὴν τοῖς γε φύλλοις ἐλάττω ταῦτα καὶ τραχύτερα καὶ τοῖς καυλοῖς καὶ μάλιστα τοῖς χυλοῖς δριμύτερα καὶ ἰσχυρότερα, καθάπερ ἢ τε θύμβρα καὶ ἢ ὀρίγανος ἢ τε ῥάφανος καὶ τὸ πήγανον· ἐπεὶ καὶ τὸ λάπαθον ἄγριον, καίπερ εὐστομώτερον τοῦ ἡμέρου ὃν, τὸν χυλὸν ὅμως ὀξύτερον ἔχει καὶ τούτῳ μάλιστα διαφέρει. πάντα δὲ καὶ ξηρότερα τῶν ἡμέρων, καὶ ἴσως αὐτῷ τούτῳ τὰ γε πολλὰ καὶ δριμύτερα καὶ ἰσχυρότερα.

[2] Ἰδίως δὲ ἡ ῥάφανος ἔχει παρὰ τὰ ἄλλα τοὺς καυλοὺς περιφερεστέρους καὶ λειοτέρους τῆς ἡμέρου, καὶ τὴν τοῦ φύλλου πρόσθεσιν ἐκείνῃ μὲν ἔχει πλατεῖαν αὕτη δὲ περιφερεστέραν, καὶ αὐτὸ δὲ τὸ φύλλον ἀγωνότερον· ἐπεὶ τὰ γε ἄλλα τραχύτερα καὶ τοῖς καυλοῖς καὶ τοῖς φύλλοις.

Ἡ δὲ γογγυλὶς καὶ τὴν ρίζαν ἔχει μακρὰν καὶ ῥαφανιδώδη καὶ τὸν καυλὸν βραχύν.

Θριδακίνη δὲ τό τε φύλλον βραχύτερον τῆς ἡμέρου, καὶ τελευομένης ἀκανθοῦται, καὶ τὸν καυλὸν ὁμοίως, τὸν ὀπὸν δὲ δριμύν καὶ φαρμακώδη. φύεται δ' ἐν ταῖς ἀρούραις· ὀπίζουσι δ' αὐτὴν ὑπὸ πυραμητόν, καὶ φασὶ καθαίρειν ὕδρωπα καὶ ἀχλὺν ἀπ' ὀφθαλμῶν ἀπάγειν καὶ ἄργεμα ἀφαιρεῖν ἐν γάλακτι γυναικεῖω.

[3] Τὸ δ' ἵπποσέλινον καὶ ἐλειοσέλινον καὶ ὀρεοσέλινον καὶ πρὸς ἑαυτὰ διαφορὰν ἔχει καὶ πρὸς τὸ ἡμερον· τὸ μὲν γὰρ ἐλειοσέλινον τὸ παρὰ τοὺς ὀχετοὺς καὶ ἐν τοῖς ἔλεσι φυόμενον μανόφυλλον τε καὶ οὐ δασὺ γίνεται, προσεμφερὲς δὲ πὼς τῷ σελίνῳ καὶ τῇ ὀσμῇ καὶ τῷ χυλῷ καὶ τῷ σχήματι. τὸ δ' ἵπποσέλινον φύλλον μὲν ἐμφερὲς τῷ ἐλειοσελίνῳ, δασὺ δὲ καὶ μεγαλόκαυλον καὶ τὴν ῥίζαν ὥσπερ ῥαφανὶς ἔχει τὸ πάχος μέλαιναν· μέλας δὲ καὶ ὁ καρπός, μέγεθος δὲ μεῖζον ὀρόβου. χρήσιμα δ' ἅμφω φασὶ πρὸς στραγγουρίαν εἶναι ἐν οἶνῳ γλυκεῖ λευκῷ καὶ τοῖς λιθιῶσι· φύεται δὲ ὁμοίως πανταχοῦ· γίνεται δὲ καὶ τι δάκρυον ἐξ αὐτοῦ ὅμοιον τῇ μύρρῳ· οἱ δὲ φασιν ὅλως μύρραν.

[4] Τὸ δὲ ὀρεοσέλινον μεῖζους ἔτι διαφορὰς ἔχει· τὸ μὲν γὰρ φύλλον ἔοικε κωνεῖω, ῥίζα δὲ λεπτή, τὸν δὲ καρπὸν ἔχει καθάπερ ἄνηθον πλὴν ἐλάττω· διδόασι δὲ τοῦτον ἐν οἶνῳ αὐστηρῷ τῶν γυναικείων χάριν.

Ἔνια δὲ ὅλως ἀσύμβλητα τοῖς ἡμέροις ἐστὶ κατὰ γε τοὺς χυλοὺς καὶ τὰς δυνάμεις, ὥσπερ σίκυος ὃ τε ἄγριος καὶ ὁ ἡμερος, ἀλλ' ἐκ τῆς προσόψεως ἔχει τὴν ὁμοιότητα, καθάπερ καὶ ἐν τοῖς στεφανώμασιν ἡ ἰωνία· τὸ γὰρ φύλλον ἔχει παρόμοιον. τούτων μὲν οὖν ἐν τοῖς εἰρημένους αἱ διαφοραί.

[7.1] Τῶν δὲ ἀρουραίων λεγομένων μετὰ ταῦτα ῥητέον, καὶ ὅλως εἴ τι ποιῶδές ἐστιν ὃ μὴ τυγχάνει βρωτόν. καλοῦμεν γὰρ λάχανα τὰ πρὸς τὴν ἡμετέραν χρεῖαν· ἐν δὲ τῷ καθ' ὅλου κάκεῖνα περιέχεται, δι' ὃ καὶ περὶ ἐκείνων λεκτέον. λάχανα μὲν δὴ καὶ τὰ τοιαῦτα καλεῖται, κιχώρη ἀπάτη χόνδρυλλα ὑποχοιρίς ἡριγέρων, καὶ ὅλως ὅσα κιχοριώδη καλεῖται διὰ τὴν ὁμοιότητα τῶν φύλλων· πάντα γὰρ πὼς ἐμφερῇ ἔχει τῷ κιχορίῳ· πάλιν καυκαλὶς ἐνθρυσκον ἡδύοσμον. οἱ δὲ μυρία ἄλλα καλοῦσιν, σκάνδιζ καὶ ὅσα ἄλλα τοιαῦτα σκανδικώδη, τραγοπώγων, οἱ δὲ κόμην καλοῦσιν, ὃ τὴν μὲν ῥίζαν ἔχει μακρὰν καὶ γλυκεῖαν τὰ δὲ φύλλα τῷ κρόκῳ ὅμοια πλὴν μακρότερα, τὸν καυλὸν δὲ βραχύν, ἐφ' οὗ τὴν κάλυκα μεγάλην καὶ ἐξ ἄκρου μέγαν τὸν πάππον πολίον, ἀφ' οὗ καλεῖται τραγοπώγων.

[2] Ὅμοίως δὲ καὶ ὅσα ἄλλα τοιαύτας μὲν ἰδέας ἔχει τοὺς δὲ χυλοὺς ἐδωδίμους ἢ ὤμοους ἢ ἐφθούς· ἔνια γὰρ δεῖται πυρώσεως, ὥσπερ μαλάχη καὶ

τευλις και τὸ λάπαθον και ἡ ἀκαλύφη και τὸ παρθένιον· τὸν δὲ στρύχνον και ὤμὸν ἐσθίουσιν, ὃν και εὐκήπευτόν τινες πρότερον ... και ἕτερα δὲ πλείω τούτων, ἐν οἷς και ὁ παροιμιαζόμενός ἐστι διὰ πικρότητα κόρχορος ἔχων τὸ φύλλον ὠκιμῶδες. πάντα δὲ τὰ μὲν ἐπέτεια τὰ δὲ ἐπετειόκαυλα τυγχάνει· τὰ μὲν γὰρ ἐξαυαίνονται τῶν δὲ διαμένουσιν εἰς πλείω χρόνον αἱ ρίζαι· σχεδὸν δὲ οὐκ ἐλάττω τὰ τοιαῦτά ἐστι.

[3] Φύεται δὲ τὰ μὲν και ἀπὸ τῶν ριζῶν και ἀπὸ τῶν σπερμάτων, τὰ δὲ ἕτερα μόνον ἀπὸ σπέρματος, εἰ μή τι και αὐτόματον. ἡ δὲ βλάστησις και τούτων και τῶν ἄλλων τῶν μὲν ἅμα τοῖς πρώτοις ὑετοῖς ἐστι μετ' ἰσημερίαν, οἷον ἀπάτης και τοῦ κύνωπος και ἦν καλοῦσι τινες βούπρηστιν, τῶν δὲ μετὰ Πλειάδα, καθάπερ και κιχορίου και σχεδὸν τῶν ἄλλων τῶν κιχοριωδῶν. και τὰ μὲν εὐθὺς ἅμα τῇ βλαστήσει τὸ ἄνθος ἀφίησι, καθάπερ ἡ ἀφία, τὰ δὲ ὕστερον οὐ πολλῶ, καθάπερ ἡ ἀνεμώνη, τὰ δὲ ἅμα τῷ ἥρι και ἐκκαυλεῖ και ἀνθεῖ, καθάπερ τὸ κιχώριον και τὰ κιχοριώδη και τῶν ἀκανθικῶν ὅσα λαχανώδη.

[4] Διαφορὰ δὲ τῶν ἀνθῶν πολλή, περὶ ἧς ἐν τοῖς πρότερον εἴρηται· σχεδὸν γὰρ ἐστι κοινὸν ἀπάντων· ἓνια δὲ και ὅλως ἀνανθη, καθάπερ και τὸ ἐπίπετρον. συμβαίνει δὲ τοῖς ἅμα τῷ καυλῷ τὸ ἄνθος ἀφιεῖσι ταχεῖαν εἶναι τὴν ἀπάνθησιν· πλὴν ἡ μὲν ἀπάπη γηράσαντος τοῦ πρώτου πάλιν ἄλλο και ἄλλο παραφύει, και τοῦτο ποιεῖ παρ' ὅλον τὸν χειμῶνα και τὸ ἔαρ ἄχρι τοῦ θέρους. πολὺν δὲ χρόνον και ὁ ἡριγέρων. τὰ δὲ ἄλλα οὐ ποιεῖ τοῦτο, καθάπερ οὐδὲ ὁ κρόκος οὔτε ὁ εὖοσμος οὔθ' ὁ λευκὸς οὔθ' ὁ ἀκανθώδης· οὗτοι δὲ ἄοσμοι.

[8.1] Κοινὴ δὲ διαφορὰ πάντων τῶν ποιωδῶν ἡ τοιάδε· τὰ μὲν γὰρ ἐστὶν ὀρθόκαυλα και νευρόκαυλα, τὰ δὲ ἐπιγειόκαυλα, καθάπερ μαλάχη σκάνδιξ σίκυος ἄγριος· τὸ δὲ ἡλιотρόπιον ἔτι μᾶλλον ὥς εἰπεῖν τοιοῦτον, ὥσπερ και ἐν τοῖς ἀκανθώδεσιν οὗσιν τρίβολος και ἡ κάππαρις και ἄλλα πλείω· και γὰρ ἐκείνων ἡ διαφορὰ πλείων. ἓνια δὲ περιαλλόκαυλα, μὴ ἔχοντα δὲ ποῦ προσπέσωσιν ἐπιγειόκαυλα, καθάπερ ἐπετίνη και ἀπαρίνη και ἀπλῶς ὧν ὁ καυλὸς λεπτὸς και μαλακὸς και μακρὸς, δι' ὃ και φύονται ταῦτα ὥς ἐπὶ τὸ πᾶν ἐν ἄλλοις· κοινὴ δὲ και αὕτη ἡ διαφορὰ πάντων οὐ μόνον τῶν ποιωδῶν και φρυγανικῶν ἀλλὰ και τῶν θαμνωδῶν· και γὰρ ἡ ἑλιξ και ἔτι μᾶλλον ἡ σμῖλαξ περιαλλόκαυλον.

[2] Ἔτι δὲ και τῶν ποιωδῶν τὰ μὲν πολύκαυλα τὰ δὲ μονόκαυλα· και τῶν μονοκαύλων τὰ μὲν ἀπαράβλαστα κατὰ τὸν καυλὸν τὰ δὲ παραβλαστικά,

καθάπερ καὶ ἐν τοῖς ἡμέροις ἢ τε ῥαφανὶς καὶ ἄλλ' ἄττα. πολὺκαυλα δὲ ὡς ἀπλῶς εἰπεῖν τὰ ἐπιγειόκαυλα, μονόκαυλα δὲ καὶ ὀλιγόκαυλα τὰ ὀρθόκαυλα. τούτων δὲ ἀπαράβλαστα τὰ λειόκαυλα κρόμυον πρᾶσον σκόροδον, ὥσπερ καὶ ἐν τοῖς ἡμέροις καὶ τὰ μὲν εὐθύκαυλα τὰ δὲ σκολιόκαυλα καὶ τούτων [τοῖς ἡμέροις] ὑπάρχει.

[3] Διαφορὰ δὲ τις καὶ τοιάδε τῶν ποιωδῶν ἐστὶ· τὰ μὲν γὰρ ἐπιγειόφυλλα τὰ δ' ἐπικαυλόφυλλα τυγχάνει τὰ δ' ἀμφοτέρως. ἐπιγειόφυλλα μὲν κορωνόπους ἄνθεμον ἀφύλλανθες ἄγχουσα πόα ἀνεμώνη ἀπαργία ἀρνόγλωσσον ἀπάπη· ἐπικαυλόφυλλα δὲ κρητὶς ἄνθεμον τὸ φυλλῶδες λωτὸς λευκοῖον· ἀμφοτέρως δὲ τὸ κιχόριον· καὶ γὰρ ἐπὶ τῶν καυλῶν ἅμα ταῖς ἐκφύσει ταῖς ἀκρεμονικαῖς ἐκφύει τι καὶ ἄνθος· καὶ τῶν φυλλακάνθων ἔνια, πλὴν ἀκανθώδεσι κομιδῇ, καθάπερ ὁ σόγκος.

[9.1] Ἔστι δὲ καὶ τὰ μὲν ἄκαρπα τὰ δὲ κάρπια. καὶ ὅλως τῶν ποιωδῶν τὰ μὲν ἄχρι τῶν φύλλων ἀφικνεῖται, τὰ δὲ καυλὸν ἔχει καὶ ἄνθος καρπὸν δὲ οὐ. τὰ δὲ καὶ καρπὸν ὥσπερ τελειοτάτην φύσιν, εἰ μὴ τι καὶ ἄνευ τοῦ ἄνθους καρποφόρον, ὥσπερ ἐπὶ τῶν δένδρων.

Διαφέρει δὲ καὶ τὰ φύλλα σχεδὸν οὐκ ἐλάττωσιν ἀλλὰ πλείοσι διαφοραῖς ἢ τὰ τῶν δένδρων· καὶ πρὸς αὐτὰ δὲ ἐκεῖνα διαφορὰς ἔχει· μεγίστην μὲν ὡς εἰπεῖν ὅτι τὰ μὲν ἀπὸ μίσχου προσπέφυκε, τὰ δὲ αὐτὰ μὲν ὡς ἀπλῶς, τὰ δὲ καυλικῇ τινι προσφύσει. καὶ τῶν μὲν ἐν τῇ βλαστήσει προτερεῖ <ὁ καυλός>, τῶν δὲ πλείστων τὰ φύλλα, καὶ σχεδὸν ἐν τῇ ἀρχῇ μέγιστα γίνονται καὶ μάλιστα ἐδώδιμα· τὰ δὲ ἐκ τῶν δένδρων προωθεῖ τινα καυλόν.

[2] Διαφέρουσι δὲ καὶ τοῖς ἄνθεσι πολὺ· ἐν μὲν γὰρ τοῖς δένδρεσι τὰ γε πλεῖστα λευκά, τὰ δὲ μικρὸν ἐπιπορφυρίζοντα, τὰ δὲ ποώδη καὶ χλωώδη, κεχρωσμένον δὲ ἀνθίνῳ <οὐδέν· ἐν δὲ τοῖς ποιώδεσι τῶν ἀνθῶν> πολλὰ καὶ παντοδαπαὶ χροιαὶ καὶ ἄκρατοι καὶ μεμιγμένοι καὶ εὖοσμοι δὴ καὶ ἄοσμοί εἰσιν. καὶ τὰ μὲν δένδρα τὴν ἄνθησιν ἀθρόαν ποιεῖται, τούτων δ' ἔνια κατὰ μέρος, ὥσπερ ἐλέγχθη καὶ περὶ τοῦ ὠκίμου, δι' ὃ καὶ πολὺν χρόνον ἀνθεῖ, καθάπερ ἄλλα τε πολλὰ καὶ τὸ ἡλιοτρόπιον καὶ τὸ κιχόριον.

[3] Πολλὰ δὲ καὶ τῶν ῥιζῶν διαφοραὶ καὶ τρόπον τινὰ αἱ τούτων φανερώτεραι· εἰσὶ γὰρ αἱ μὲν ξυλῶδεις αἱ δὲ σαρκώδεις καὶ ἰνώδεις, ὥσπερ καὶ τῶν ἡμέρων, καθάπερ αἱ τε τοῦ σίτου καὶ τῆς πόας τῆς πλείστης. αὐτῶν δὲ τούτων ἕκασται πλείστας ἔχουσι διαφορὰς χρώμασιν ὁσμαῖς χυμοῖς μεγέθεσιν· αἱ μὲν γὰρ λευκαὶ αἱ δὲ μέλαιναι αἱ δ' ἐρυθραί, καθάπερ ἢ τε τῆς ἀγχούσης καὶ τοῦ ἐρευθεδάνου· αἱ δ' ὥσπερ ξανθαὶ καὶ ξυλοειδεῖς· καὶ

γλυκεῖαι δὲ καὶ πικραὶ καὶ δριμεῖαι καὶ εὐώδεις καὶ κακῶδεις, καὶ ἔναια
φαρμακῶδεις, ὥς ἐν ἄλλοις εἴρηται.

[4] Διαφοραὶ δὲ καὶ τῶν σαρκωδῶν· αἱ μὲν γὰρ στρογγύλαι αἱ δὲ προμήκεις
καὶ βαλανώδεις, ὥσπερ ἀσφοδέλου καὶ κρόκου· καὶ αἱ μὲν λεπυριώδεις,
ὥσπερ ἡ τοῦ βολβοῦ καὶ τῆς σκίλλης καὶ ὅσαι βολβώδεις καὶ κρομῦου δὲ καὶ
γηθίου καὶ ὅσα τούτοις ὅμοια. αἱ δὲ ὀμαλεῖς καὶ ψαθυραὶ καὶ μαλακαὶ δι’
ὄλου καὶ ὥσπερ ἄφλοιοι, καθάπερ τοῦ ἄρου· αἱ δὲ φλοιὸν ἔχουσι πρὸς τῇ
σαρκί, καθάπερ ἡ τοῦ κυκλαμίνου καὶ τῆς γογγυλίδος. οὐχ ἅπασαι δ’ αἱ
εὐώδεις ἢ γλυκεῖαι ἢ εὐστομοὶ καὶ ἐδώδιμοι, οὐδ’ αἱ πικραὶ ἄβρωτοι· ἀλλ’
ὅσαι ἀβλαβεῖς εἰσι τῷ σώματι μετὰ τὴν προσφορὰν· ἔναια γὰρ γλυκεῖαι μὲν
θανάσιμοι δὲ καὶ νοσώδεις, [5] αἱ δὲ πικραὶ μὲν ἢ κακῶδεις ὠφέλιμοι δέ. τὸν
αὐτὸν δὲ τρόπον καὶ φύλλα καὶ καυλοί, καθάπερ τοῦ ἀσπινθίου καὶ τοῦ
κενταυρίου. διαφορὰ δὲ καὶ κατὰ τὴν βλάστησιν καὶ κατὰ τὴν ἄνθησιν, οἷον
ἀρχομένου χειμῶνος καὶ μεσοῦντος καὶ πάλιν ἤρος ἢ θέρους ἢ μετοπώρου.
καὶ ἐπὶ τῶν καρπῶν δὲ ὁμοίως τῷ βρωτοῦς εἶναι καὶ ἐγγύλους ἐνίοις καὶ
φύλλα καὶ σπέρματα καὶ ρίζας· καὶ ἐν αὐτοῖς τούτοις κατὰ τοὺς χυλοὺς, οἷον
ὀξύτητι καὶ δριμύτητι καὶ γλυκύτητι καὶ αὐστηρότητι καὶ ταῖς ἄλλαις ταῖς
τοιαύταις ἀπλῶς τε καὶ κατὰ τὸ μᾶλλον. τὰς μὲν οὖν διαφορὰς ἐν τούτοις
ληπτέον.

[10.1] Διηρημένων δὲ κατὰ τὰς ὥρας ἐκάστων πρὸς τε τὰς βλαστήσεις καὶ
κατὰ τὰς ἀνθήσεις καὶ τελειώσεις τῶν καρπῶν, οὐδὲν ἀναβλαστάνει πρὸ τῆς
οἰκείας ὥρας οὔτε τῶν ῥιζοφυῶν οὔτε τῶν σπερμοφυῶν, ἀλλ’ ἕκαστον
ἀναμένει τὴν οἰκείαν οὐδ’ ὑπὸ τῶν ὑδάτων οὐδὲν πάσχον· ἔναια γὰρ θερινὰ
κομιδῇ καὶ τῇ βλαστήσει καὶ τῇ ἀνθήσει, καθάπερ ὁ τε σκόλυμος καὶ ὁ σίκυος
ἄγριος, ὥσπερ καὶ περὶ τῶν φρυγανικῶν ἐλέχθη περὶ κονύζης τε καὶ
καππάριδος καὶ τῶν ἄλλων· οὐδὲν γὰρ οὐδὲ ἐκείνων ἀνθεῖ καὶ βλαστάνει πρὸ
[2] τῆς οἰκείας ὥρας. δι’ ὃ καὶ ταύτη δόξαιεν ἂν διαφέρειν τῶν δένδρων. τῶν
μὲν γὰρ ἅμα πως πάντων ἢ ἐγγὺς ἢ βλάστησις, εἰ δὲ μὴ κατὰ μίαν γε ὥραν ὥς
εἰπεῖν· τούτων δὲ ἐν πολλαῖς μᾶλλον δὲ ἐν ἀπάσαις ἢ βλάστησις καὶ ἔτι
μᾶλλον ἢ ἄνθησις, ὥστε εἴ τις ἐθέλει κατανοεῖν σχεδὸν συνεχῆς γίνεται καθ’
ὅλον ἐνιαυτὸν καὶ ἢ βλάστησις καὶ ἢ ἄνθησις· αἰεὶ γὰρ ἕτερον ἐξ ἐτέρου
διαδεχόμενον πάσας καταλαμβάνει τὰς ὥρας· οἷον μετὰ τὴν ἀπάπην κρόκος
ἔσται καὶ ἀνεμώνη καὶ ὁ ἡριγέρων καὶ τὰ ἄλλα χειμερινά, μετὰ δὲ ταῦτα τὰ
ἡρινὰ «καὶ θερινὰ» καὶ μετοπωρινά.

[3] πολλὰ δέ, ὥσπερ ἐλέχθη, διὰ τὸ κατὰ μέρος ἀνθεῖν ἐπιτείνεται ταῖς

ῥαις· ἓνα γὰρ οὕτως ἀνθεῖ, καθάπερ ἢ τε ἀπάπη καὶ τὸ ὄνοχειλὲς καὶ τὸ κιχόριον καὶ τὸ ἀρνόγλωσσον καὶ ἄλλα· διὰ δὲ τὴν συνέχειαν καὶ τὴν περικατάληψιν τὴν ὑπ' ἀλλήλων οὐ φαίνεται ῥᾶδιον ἐν ἐνίοις οὐδ' ὀρίσαι ποῖα πρῶτα βλαστάνει καὶ ποῖα ὀψιβλαστῇ· πλὴν εἴ τις ὑποθοῖτο τοῦ ἔτους τὴν ἀρχὴν τινα [4] ὥρας τινὸς ἀρχῇ, καὶ αὐτῶν δὲ τούτων τὰς γενέσεις καὶ τὰς ὥρας ὅταν τελειωθέντων τῶν καρπῶν πάλιν ἄλλας ἀρχὰς ἐνίστῳνται τῆς γενέσεως· ὅπερ μάλιστα δοκεῖ συμβαίνειν μετ' ἰσημερίαν μετοπωρινήν· τότε γὰρ ἤδη τὰ σπέρματα πλεῖστα τετελείωται καὶ τῶν δενδρικῶν καρπῶν οἱ πολλοί, καὶ ἅμα μεταβολὴ τις αὐτοῦ τούτου προσγίνεται καὶ τῆς ὥρας· ὅσα δὲ ἀτελεῖ καὶ ἄπεπτα περικαταλαμβάνεται, τούτοις κατὰ λόγον ἐκ περιόδου καὶ ἡ βλάστησις γίνεται καὶ ἡ ἄνθησις καὶ ἡ τελείωσις· δι' ὃ συμβαίνει τὰ μὲν ὑπὸ τροπᾶς ἀνθεῖν τὰ δ' ὑπὸ Κύνα τὰ δὲ καὶ μετὰ Ἀρκτοῦρον καὶ ἰσημερίαν μετοπωρινήν.

[5] Ἀλλὰ ταῦτα μὲν ἔοικε κοινωτέραν ἔχειν σκέψιν εἰς ἀφορισμὸν ἀρχῆς, ὅτι δὲ αἱ διαφοραὶ πλείους ἢ οὐκ ἐλάττους ἐν τούτοις φανερόν. ἐπεὶ καὶ ἀεὶφυλλα τῶν τοιοῦτων ἐστὶν ἓνα, καθάπερ τὸ πόλιον καὶ ἡλιοτρόπιον καὶ τὸ ἀδιάντον.

[11.1] Ἀφορισμένων οὖν τούτων περὶ τὰς διαφορὰς ἐν οἷς γίνονται καὶ πῶς λεκτέον ἤδη τὰς καθ' ἕκαστον ἱστορίας ... ὅσα μὴ κατὰ τὴν ἰδίαν ἐκάστου φύσιν. λέγω δὲ οἷον τὰ σταχυώδη καὶ τὰ σκανδικώδη καὶ μονοφυῆ, κἂν εἴ τι ἕτερόν ἐστι τοιοῦτον κοινὸν ἐπὶ πάντων λαβεῖν, ὃ τῇ αἰσθήσει γνῶριμον ἢ φύλλοις ἢ ἄνθεσιν ἢ ρίζαις ἢ καρποῖς· ἐκ γὰρ τῶν φανερῶν ὁ μερισμὸς ὥσπερ καὶ ἐκ τῶν ριζῶν.

[2] Σταχυώδη μὲν οὖν ἐστὶν ὃ τε κύνωψ ὑπὸ τινων καλούμενος πλείους ἔχων ιδέας ἐν ἑαυτῷ· καὶ ὁ ἀλωπέκουρος καὶ ὁ στελέφουρος ὑπ' ἐνίων δὲ ἀρνόγλωσσον τῶν δὲ ὄρτυξ καλούμενος· παρόμοιον δὲ τούτῳ τρόπον τινὰ καὶ ἡ θρυαλλίς. ἀπλᾶ δὲ καὶ μονοειδῆ τρόπον τινὰ ταῦτα καὶ στάχυν οὐκ ὀξὺν οὐδ' ἀθερώδη ἔχοντα· ὃ δ' ἀλωπέκουρος μαλακὸν καὶ χνοωδέστερον, ὅτι καὶ ὅμοιον ταῖς τῶν ἀλωπέκων οὐραῖς, ὅθεν καὶ τοῦνομα μετεῖληφεν. ὅμοιος δὲ τούτῳ καὶ ὁ στελέφουρος, πλὴν οὐχ ὥσπερ ἐκεῖνος ἀνθεῖ κατὰ μέρος ἀλλὰ δι' ὅλου τοῦ στάχους ὥσπερ ὁ πυρός. ἡ δὲ ἄνθησις ἀμφοῖν χνοώδης, καθάπερ καὶ τοῦ σίτου· παρόμοιον δὲ τῇ ὅλῃ μορφῇ τῷ πυρῷ πλὴν πλατυφυλλότερον. ὡσαύτως δὲ τούτοις καὶ τὰ ἄλλα τὰ σταχυώδη λεκτέον.

[3] Τὰ δὲ κιχωριώδη πάντα μὲν ἐπετειόφυλλα καὶ ριζόφυλλα, βλαστάνει δὲ μετὰ Πλειάδα πλὴν τῆς ἀπάπης, τοῖς δὲ καυλοῖς καὶ ταῖς ρίζαις μεγάλας ἔχουσι διαφοράς· οἱ μὲν γὰρ τῶν ἄλλων ἀπλούστεροι καὶ ἐλάττους, ὃ δὲ τοῦ

κιχορίου μέγας καὶ ἀποφύσεις ἔχων πολλάς, ἔτι δὲ γλίσχρος καὶ δυσδιαίρετος, δι' ὃ καὶ δεσμῶ χρωῶνται· παραβλαστητικὸν δὲ καὶ τῇ ῥίζῃ καὶ ἄλλως μακρόρριζον, δι' ὃ καὶ δυσώλεθρον· ὅταν γὰρ ἐκλαχανίσωνται, πάλιν τὸ ὑπόλοιπον ἀρχὴν λαμβάνει γενέσεως. συμβαίνει δὲ καὶ παρανθεῖν αὐτοῦ μέρος ἄλλο καὶ ἄλλο, καὶ τοῦτο ἄχρι τοῦ μετοπώρου, σκληροῦ δοκοῦντος εἶναι τοῦ καυλοῦ. φέρει δὲ καὶ λοβὸν ἐν ᾧ τὸ σπέρμα περὶ τὰ ἄκρα τῶν καυλῶν.

[4] Ἡ δὲ ὑποχοιρὶς λειοτέρα καὶ ἡμερωτέρα τῇ προσόψει καὶ γλυκυτέρα καὶ οὐχ ὥσπερ ἡ χόνδρυλλα· τὸ γὰρ ὅλον οὐκ ἐδώδιμος αὕτη καὶ ἄβρωτος καὶ ἐν τῇ ῥίζῃ δριμὺν ὁπὸν ἔχει καὶ πολύν.

Ἄβρωτος δὲ καὶ πικρὰ ἡ ἀπάπη· πρωϊανθὴς δὲ καὶ ταχὺ γηράσκει καὶ ἀποπαπποῦται, εἴτ' ἄλλο φύεται πάλιν καὶ ἄλλο καὶ τοῦτο παρ' ὅλον ποιεῖ τὸν χειμῶνα καὶ τὸ ἔαρ ἄχρι τοῦ θέρους· τὸ δ' ἄνθος μηνιοειδές.

Ὡσαύτως δὲ καὶ ἡ πικρίς· καὶ γὰρ αὕτη τῷ ἥρι ἀνθεῖ, καὶ παραπλησία δι' ὅλου τοῦ χειμῶνος καὶ τοῦ θέρους παρανθεῖ· τῇ γεύσει δὲ πικρά, δι' ὃ καὶ τοῦνομα εἴληφε. ταῦτα μὲν οὖν ἐν ταύταις ταῖς διαφοραῖς. πειρατέον δέ, ὡς ἐλέγχῃ, καὶ τῶν ἄλλων λαμβάνειν ὁμοίως.

[12.1] Πολὺν δὲ τι γένος ἐστὶ καὶ τῶν σαρκορρίζων ἢ κεφαλορρίζων, ἃ καὶ πρὸς τὰ ἄλλα καὶ καθ' αὐτὰ τὰς διαφορὰς ἔχει ῥίζαις τε καὶ φύλλοις καὶ καυλοῖς καὶ ταῖς ἄλλαις μορφαῖς. τῶν γὰρ ῥιζῶν, ὥσπερ εἴρηται πρότερον, αἱ μὲν λεπυριώδεις αἱ δὲ σαρκώδεις, καὶ αἱ μὲν ἔχουσιν φλοιὸν αἱ δ' ἄφλοιοι, ἔτι δὲ αἱ μὲν στρογγύλαι αἱ δὲ προμήκεις καὶ αἱ μὲν ἐδώδιμοι αἱ δ' ἄβρωτοι. ἐδώδιμοι μὲν γὰρ οὐ μόνον βολβοὶ καὶ τὰ ὅμοια τούτοις, ἀλλὰ καὶ ἡ τοῦ ἀσφοδέλου ῥίζα καὶ ἡ τῆς σκίλλης, πλὴν οὐ πάσης ἀλλὰ τῆς Ἐπιμενιδείου καλουμένης, ἣ ἀπὸ τῆς χρήσεως ἔχει τὴν προσηγορίαν· αὕτη δὲ στενοφυλλοτέρα τε καὶ λειοτέρα τῶν λοιπῶν ἐστίν.

[2] Ἐδώδιμος δὲ καὶ ἡ τοῦ ἄρου καὶ αὕτη καὶ τὰ φύλλα προαφεψηθέντα ἐν ὄξει καὶ ἐστίν ἡδεῖα τε καὶ πρὸς τὰ ῥήγματα ἀγαθὴ. πρὸς δὲ τὴν αὐξησιν αὐτῆς, ὅταν ἀποφυλλίσωσιν, ἔχει δὲ μέγα σφόδρα τὸ φύλλον, ἀνορύξαντες στρέφουσιν, ὅπως ἂν μὴ διαβλαστάνῃ ἀλλὰ πᾶσαν ἔλκη τὴν τροφὴν εἰς ἑαυτήν, ὃ καὶ ἐπὶ τῶν βολβῶν τινες ποιοῦσι συντιθέντες· ἡ δὲ τοῦ δρακοντίου, καλοῦσι γάρ τι δρακόντιον ἄρον διὰ τὸ τὸν καυλὸν ἔχειν τινὰ ποικιλίαν, ἄβρωτος καὶ φαρμακώδης.

[3] Ἀλλὰ ἡ τοῦ φασγάνου καλουμένου γλυκεῖα τε ἐψηθεῖσα, καὶ τριφθεῖσα μίγνυμένη τῷ ἀλεύρῳ ποιεῖ τὸν ἄρτον γλυκὺν καὶ ἀσινῇ· στρογγύλῃ δὲ ἐστίν

καὶ ἄφλοιος καὶ ἀποφύσεις ἔχουσα μικράς, ὥσπερ τὸ γήθουν· πολλὰς δὲ εὐρίσκουσιν ἐν ταῖς σκαλοπιαῖς· χαίρει γὰρ καὶ συλλέγει τὸ ζῶον.

Ἡ δὲ τοῦ θησείου τῇ μὲν γεύσει πικρά, τριβομένη δὲ κοιλίαν ὑποκαθαίρει. φαρμακώδεις δὲ τινὲς εἰσι καὶ ἕτεραι, πολλῶν δὲ οὔτε φαρμακώδεις οὔτε ἐδώδιμοι. καὶ αὗται μὲν ἐν ταῖς ῥίζαις αἱ διαφοραί.

[13.1] Κατὰ δὲ τὰ φύλλα τοῖς τε μεγέθεσιν καὶ τοῖς σχήμασιν. ὁ μὲν ἀσφόδελος μακρὸν καὶ στενότερον καὶ ὑπόγλισχρον ἔχει τὸ φύλλον, ἡ δὲ σκίλλα πλατὺ καὶ εὐδιαίρετον, τὸ δὲ φάσγανον ὑπὸ τινων δὲ καλούμενον ξίφος ξιφοειδές, ὅθεν ἔσχε καὶ τοῦνομα, ἡ δὲ ἴρις καλαμωδέστερον· τὸ δὲ τοῦ ἄρου πρὸς τῇ πλατύτητι καὶ ἔγκοilon καὶ σικυῶδές ἐστιν· ὁ δὲ νάρκισσος στενὸν καὶ πολὺ καὶ λιπαρόν· βολβὸς δὲ καὶ τὰ βολβῶδη παντελῶς στενὰ καὶ τοῦ κρόκου δ' ἔτι στενότερον.

[2] Καυλὸν δὲ τὰ μὲν οὐκ ἔχει τὸ ὅλον οὐδ' ἄνθος, ὥσπερ τὸ ἄρον τὸ ἐδώδιμον· τὰ δὲ τὸν τοῦ ἄνθους μόνον, ὥσπερ ὁ νάρκισσος καὶ ὁ κρόκος· ἔνια δὲ ἔχει, καθάπερ ἡ σκίλλα καὶ ὁ βολβὸς καὶ ἡ ἴρις καὶ τὸ ξίφιον· μέγιστον δὲ πάντων ἀσφόδελος· ὁ γὰρ ἀνθέρικος μέγιστος· ὁ δὲ τῆς ἱριδος ἐλάττων μὲν σκληρότερος δὲ τὸ δὲ ὅλον ἀνθερικώδης. ἔστι δὲ καὶ πολύκαρπος ὁ ἀσφόδελος, καὶ ὁ καρπὸς αὐτοῦ ξυλώδης τῇ μὲν μορφῇ τρίγωνος τῷ δὲ χρώματι μέλας· γίνεται δὲ ἐν τῷ στρογγύλῳ τῷ ὑποκάτω τοῦ ἄνθους, ἐκπίπτει δὲ τοῦ [3] θέρου, ὅταν τοῦτο διαχάνῃ. τὴν ἄνθησιν ποιεῖται κατὰ μέρος, ὥσπερ καὶ ἐπὶ τῆς σκίλλης, ἄρχεται δὲ πρῶτον ἀπὸ τῶν κάτωθεν. ἐν δὲ τῷ ἀνθερίῳ συνίσταται σκώληξ, ὅς ἐστι ἄλλο μεταβάλλει ζῶον ἀνθηροειδές, εἶθ' ὅταν ὁ ἀνθέρικος ἀνὰ τῇ διεσθίον ἐκπέταται. δοκεῖ δὲ ἴδιον ἔχειν πρὸς τὰ ἄλλα τὰ λειόκαυλα, διότι στενὸς ὢν ἀποφύσεις ἄνωθεν ἔχει. πολλὰ δὲ εἰς τροφήν παρέχεται χρήσιμα· καὶ γὰρ ὁ ἀνθέρικος ἐδώδιμος σταθευόμενος καὶ τὸ σπέρμα φρυγόμενον καὶ πάντων δὲ μάλιστα ἡ ῥίζα κοπτομένη μετὰ σύκου καὶ πλείστην ὄνησιν ἔχει καθ' Ἡσίοδον.

[4] Ἄπαντα μὲν οὖν φιλόζωα τὰ κεφαλόρριζα μάλιστα δ' ἡ σκίλλα· καὶ γὰρ κρεμαννυμένη ζῇ καὶ πλείστον γε χρόνον διαμένει· δύναται δὲ καὶ τὰ θησαυριζόμενα σώζειν, ὥσπερ τὴν ῥόαν ἐμπηγνυμένου τοῦ μίσχου, καὶ τῶν φυτευομένων δ' ἔνια βλαστάνει θάπτον ἐν αὐτῇ· λέγεται δὲ καὶ πρὸ τῶν θυρῶν τῆς εἰσόδου φυτευθεῖσαν ἀλεξητήριον εἶναι τῆς ἐπιφερομένης δηλήσεως. πάντα δὲ ταῦτα ἀθρόα φύεται, καθάπερ καὶ τὰ κρόμυα καὶ τὰ σκόροδα· παραβλαστάνουσι γὰρ ἀπὸ τῆς ῥίζης· ἔνια δὲ καὶ ἀπὸ τοῦ σπέρματος φανερώς, οἷον ὁ τε ἀνθέρικος καὶ τὸ λείριον καὶ τὸ φάσγανον καὶ

ὁ βολβός.

[5] Ἄλλ' ἴδιον τοῦτο τοῦ βολβοῦ λέγεται, τὸ μὴ ἀπὸ πάντων βλαστάνειν ἅμα τῶν σπερμάτων, ἀλλὰ τοῦ μὲν αὐτοετὲς τοῦ δ' εἰς νέωτα, καθάπερ τὸν αἰγίλωπα φασὶ καὶ τὸν λωτόν. τοῦτο μὲν οὖν εἵπερ ἀληθὲς κοινὸν ἐτέρων. κοινὸν δὲ ἴσως καὶ τὸ μέλλον λέγεσθαι, πλὴν οὐ πολλῶν, θαυμαστὸν δὲ ἐπὶ πάντων, ὅπερ ἐπὶ τε τῆς σκίλλης καὶ τοῦ ναρκίσσου συμβαίνει· τῶν μὲν γὰρ ἄλλων καὶ τῶν ἐξ ἀρχῆς φυτευομένων καὶ τῶν βλαστανόντων καθ' ὥραν ἔτους τὸ φύλλον ἀνατέλλει πρῶτον, εἴθ' ὕστερον ὁ καυλός· ἐπὶ δὲ τούτων ὁ καυλὸς πρότερον.

[6] Τοῦ ναρκίσσου δὲ ὁ τοῦ ἄνθους μόνον εὐθὺ προωθῶν τὸ ἄνθος· τῆς δὲ σκίλλης καθ' αὐτόν, εἰς ὕστερον ἐπὶ τούτῳ τὸ ἄνθος ἀνίσχον προσκαθήμενον· ποιεῖται δὲ τὰς ἀνθήσεις τρεῖς, ὧν ἡ μὲν πρώτη δοκεῖ σημαίνειν τὸν πρῶτον ἄροτον, ἡ δὲ δευτέρα τὸν μέσον, ἡ δὲ τρίτη τὸν ἔσχατον· ὥς γὰρ ἂν αὗται γένωνται καὶ οἱ ἄροτοι σχεδὸν οὕτως ἐκβαίνουσιν· ὅταν δὲ οὗτος ἀπογηράσῃ, τότε ἡ τῶν φύλλων βλάστησις πολλαῖς ἡμέραις ὕστερον· ὡσαύτως δὲ καὶ ἐπὶ τοῦ ναρκίσσου, πλὴν οὔτε καυλὸν ἕτερον ἔχει παρὰ τὸν τοῦ ἄνθους, ὥσπερ εἵπομεν, οὔτε καρπὸν φανερόν, ἀλλ' αὐτὸ τὸ ἄνθος ἅμα τῷ καυλῷ καταφθίνει καὶ ὅταν ἀνανθῇ τότε τὰ φύλλα ἀνατέλλει.

[7] Πρὸς μὲν οὖν τὰ ἄλλα τὰ συνάμφω ταῦτα ἴδια· πρὸς δὲ τὰ προανθοῦντα τῶν φύλλων καὶ τῶν καυλῶν, ὅπερ δοκεῖ ποιεῖν τὸ τίφυον καὶ ἕτερα τῶν ἀνθικῶν, ἔτι τε τῶν δένδρων ἡ ἀμυγδαλὴ μάλιστα ἢ μόνον, ὅτι ταῦτα μὲν ἅμα τῷ ἄνθει προφαίνει τὸ φύλλον ἢ εὐθὺς κατόπιν, ὥστε καὶ διαζητεῖσθαι περί τινων, ἐπὶ δὲ τούτων οἷον ἀφ' ἐτέρας ἀρχῆς φαίνεται καὶ διὰ τὸ πλῆθος τῶν ἡμερῶν καὶ διὰ τὸ μὴ πρότερον βλαστάνειν πρὶν τοῦ μὲν τὸ ἄνθος τοῦ δὲ καὶ ὁ καυλὸς ὅλος ἀπογηράσῃ. ἡ δὲ βλάστησις προτέρα μὲν τῆς σκίλλης, ὑστέρα δὲ τοῦ ναρκίσσου· πολὺ δὲ πλεόν τὸ φύλλον οὗτος ἀφίησι, καὶ ἐστὶν ἡ ρίζα αὐτῇ μικρὰ καὶ οὐ μεγάλη, προσεμφερῆς δὲ κατὰ τὸ σχῆμα τῷ βολβῷ, πλὴν <οὐ> λεπυριώδης. ταῦτα μὲν οὖν ἔχει σκέψιν.

[8] Τῶν δὲ βολβῶν ὅτι πλείω γένη φανερόν, καὶ γὰρ τῷ μεγέθει καὶ τῇ χροᾷ καὶ τοῖς σχήμασι διαφέρουσι καὶ τοῖς χυλοῖς· ἐνιαχοῦ γὰρ οὕτω γλυκεῖς ὥστε καὶ ὠμοὺς ἐσθίεσθαι, καθάπερ ἐν Χερρονήσῳ τῇ Ταυρικῇ. μεγίστη δὲ καὶ ἰδιωτάτη διαφορὰ τῶν ἐριοφόρων· ἔστι γάρ τι γένος τοιοῦτον, ὃ φύεται μὲν ἐν αἰγιαλοῖς ἔχει δὲ τὸ ἔριον ὑπὸ τοὺς πρώτους χιτῶνας, ὥστε ἀνὰ μέσον εἶναι τοῦ τε ἐδωδίου τοῦ ἐντὸς καὶ τοῦ ἔξω· ὑφαίνεται δὲ ἐξ αὐτοῦ καὶ πόδεια καὶ ἄλλα ἱμάτια· δι' ὃ καὶ ἐριῶδες τοῦτο καὶ οὐχ ὥσπερ τὸ ἐν Ἰνδοῖς τριχῶδες.

[9] Πλείω δὲ καὶ τὰ βολβώδη καὶ ἐλάττω. ταῦτα δὲ ... καθάπερ τὸ λευκόϊον καὶ βολβίνη καὶ ὀπιτίων καὶ κύϊξ καὶ τρόπον τινὰ τὸ σισυρίγχιον. βολβώδη δὲ ταῦτα ὅτι στρογγύλα ταῖς ρίζαις· ἐπεὶ τοῖς γε χρώμασι λευκὰ καὶ οὐ λευριώδη. ἴδιον δὲ τοῦ σισυριγγίου τὸ τῆς ρίζης αὐξάνεσθαι τὸ κάτω πρῶτον, ὃ καλοῦσι ... χειμῶνα, τοῦ δ' ἥρος ὑποφαίνοντος τοῦτο μὲν ταπεινοῦσθαι τὸ δ' ἄνω τὸ ἐδώδιμον αὐξάνεσθαι. καὶ τὰ μὲν τοιαύτας ἔχει τὰς διαφοράς.

[14.1] Ἴδια δὲ καὶ ταῦτα ἐν τοῖς ποιώδεσιν, οἷον τὸ [τε] ἐπὶ τοῦ ἀδιάντου συμβαῖνον· οὐδὲ γὰρ ὑγραίνεται τὸ φύλλον βρεχόμενον οὐδ' ἐπίδροσόν ἐστι διὰ τὸ μὴ τὴν νοτίαν ἐπιμένειν, ὅθεν καὶ ἡ προσηγορία. γένη δὲ αὐτοῦ δύο, τὸ μὲν λευκὸν τὸ δὲ μέλαν, χρήσιμα δ' ἀμφοτέρα πρὸς ἔκρυσιν κεφαλῆς τριχῶν ἐν ἐλαίῳ τριβόμενα. φύεται δὲ μάλιστα πρὸς τὰ ὕδρηλά. ὥς δὲ οἴονται τινες, καὶ πρὸς στραγγουρίαν τὸ τριχομανὲς ποιεῖ· ἔχει δὲ τὸν καυλὸν ὅμοιον τῷ ἀδιάντῳ τῷ μέλανι, φύλλα δὲ μικρὰ σφόδρα καὶ πυκνὰ καὶ πεφυκότα καταντικρὺ ἀλλήλων, ρίζα δὲ οὐχ ὕπεστι· χωρία δὲ φιλεῖ σκιερά.

[2] Τῶν δὲ κατὰ μέρος ἀνθούτων ἴδιον τὸ περὶ τὸ ἄνθεμον, ὅτι τῶν μὲν ἄλλων πάντων τὰ κάτω πρῶτον ἀπανθεῖ τούτου δὲ τὰ ἄνω· τυγχάνει δ' αὐτοῦ τὸ μὲν κύκλω τὸ λευκὸν ἄνθος τὸ δὲ ἐν τῷ μέσῳ τὸ χλωρόν· καὶ καρπὸς ὃς ἐκπίπτει, καθάπερ τοῖς ἀκανθώδεσι, καταλιπὼν τὴν πρόσφυσιν κενήν· εἶδη δ' αὐτοῦ πλείω.

[3] Ἴδιον δὲ καὶ τὸ περὶ τὴν ἀπαρίνην, ἥ καὶ τῶν ἱματίων ἀντέχεται διὰ τὴν τραχύτητα καὶ ἐστὶ δυσσφαίρετον· ἐν τούτῳ γὰρ ἐγγίνεται τῷ τραχεῖ τὸ ἄνθος οὐ προῖον οὐδὲ ἐκφαίνειν ἀλλ' ἐν αὐτῷ πεττόμενον καὶ σπερμογονοῦν· ὥστε παρόμοιον εἶναι τὸ συμβαῖνον ὥσπερ ἐπὶ τῶν γαλεῶν καὶ ῥινῶν· ἐκεῖνά τε γὰρ ἐν ἑαυτοῖς ὠτοκῆσαντα ζωογονεῖ, καὶ αὕτη τὸ ἄνθος ἐν ἑαυτῇ κατέχουσα καὶ πέττουσα καρποτοκεῖ.

[15.1] Ὅσα δὲ τὰς ἀνθήσεις λαμβάνουσι ἀκολουθοῦντα τοῖς ἄστροις, οἷον τὸ ἡλιοτρόπιον καλούμενον καὶ ὁ σκόλυμος, ἅμα γὰρ ταῖς τροπαῖς καὶ οὗτος, ἔτι δὲ τὸ χελιδόνιον, καὶ γὰρ τοῦτο ἅμα τῷ χελιδονίᾳ ἀνθεῖ, ταῦτα δὲ δόξειεν ἂν τῇ μὲν φυσικῇ ἔχειν τὴν αἰτίαν τῇ δὲ συμπτωματικῇ.

[2] Πολλὰ δὲ τοιαῦτά ἐστι καὶ ἐν ἐτέροις ἴδια· οἷον καὶ ἡ τοῦ ἀειζώου φύσις τὸ διαμένειν ὑγρὸν αἰεὶ καὶ χλωρόν, φύλλον σαρκῶδες ἔχον καὶ λεῖον καὶ πρόμηκες. φύεται δὲ ἐν τε τοῖς ἀλιπέδοις τοῖς τε ἐπὶ τῶν τειχῶν ἀνδήροις καὶ οὐχ ἥκιστα ἐπὶ τῶν κεράμων, ὅταν ἐπιγένηται γῆς τις ἀμμώδης συρροή.

[3] Πολλὰ δ' ἂν τις ἴσως λάβοι καὶ ἕτερα περιττά. χρή δέ, ὥσπερ πολλάκις

εἴρηται, τὰς ιδιότητας θεωρεῖν καὶ τὰς διαφορὰς πρὸς τὰ ἄλλα. τὰ μὲν ἐν πλείοσιν ιδέαις ἐστὶ καὶ σχεδὸν οἷον ὁμωνύμοις, ὥσπερ ὁ λωτός· τούτου γὰρ εἶδη πολλὰ διαφέροντα καὶ φύλλοις καὶ καυλοῖς καὶ ἄνθεσι καὶ καρποῖς, ἐν οἷς καὶ ὁ μελίλωτος καλούμενος· καὶ δυνάμει δὲ τῇ κατὰ τὴν προσφορὰν, ἔτι τε τῷ μὴ τοὺς αὐτοὺς τόπους ζητεῖν. ὁμοίως δὲ καὶ ἕτερα πλείω.

[4] Τὰ δὲ ἐν ἐλάττοσιν, ὥσπερ ὁ στρύχνος ὁμωνυμία τινὶ παντελῶς εἰλημμένος· ὁ μὲν γὰρ ἐδώδιμος καὶ ὥσπερ ἡμερον, καρπὸν ἔχων ῥαγώδη, ἕτεροι δὲ δύο εἰσὶν, ὧν ὁ μὲν ὕπνον ὁ δὲ μανίαν ἐμποιεῖν δύναται, πλείων δ' ἔτι δοθεὶς καὶ κτείνει. ὁμοίως δὲ τοῦτο καὶ ἐφ' ἐτέρων ἐστὶ λαβεῖν, ἃ πολλὴν ἔχει διάστασιν. περὶ μὲν οὖν τῶν ἄλλων τῶν ποιωδῶν ἱκανῶς εἴρηται. περὶ δὲ τοῦ σίτου καὶ τῶν σιτωδῶν μετὰ ταῦτα λεκτέον· τοῦτο γὰρ ἔτι κατάλοιπον ἦν.

Liber VIII

[1] Περὶ μὲν οὖν τῶν ἄλλων ποιωδῶν ἱκανῶς εἰρήσθω· περὶ δὲ σίτου καὶ τῶν σιτωδῶν λέγωμεν ὁμοίως τοῖς πρότερον· τοῦτο γὰρ κατάλοιπον ἦν τῶν ποιωδῶν.

Δύο δὲ αὐτοῦ γένη τὰ μέγιστα τυγχάνει· τὰ μὲν γὰρ σιτώδη, οἷον πυροὶ κριθαὶ τίφαι ζειαὶ τὰ ἄλλα τὰ ὁμοιόπυρα ἢ ὁμοιόκριθα· τὰ δὲ χεδροπά, οἷον κύαμος ἐρέβινθος πισὸς καὶ ὄλως τὰ ὄσπρια προσαγορευόμενα· τρίτον δὲ παρ' αὐτὰ κέγχρος ἔλυμος σήσαμον καὶ ἀπλῶς τὰ ἐν τοῖς θερινοῖς ἀρότοις ἀνώνυμα κοινῇ προσηγορίᾳ.

[2] Ἔστι δὲ ἡ μὲν γένεσις αὐτῶν μία καὶ ἀπλῇ· φύεται γὰρ ἀπὸ σπέρματος, ἐὰν μὴ τι σπάνιον καὶ ὀλίγον ἀπὸ τῆς ρίζης. ὥραι δὲ τοῦ σπόρου τῶν πλείστων δύο· πρώτη μὲν καὶ μάλιστα ἡ περὶ Πλειάδος δύσιν, ἣ καὶ Ἡσίοδος ἠκολούθηκε καὶ σχεδὸν οἱ πλείστοι, δι' ὃ καὶ καλοῦσί τινες αὐτὴν ἄροτον· ἄλλη δ' ἀρχομένου τοῦ ἥρος μετὰ τὰς τροπὰς τοῦ χειμῶνος. οὐ τῶν αὐτῶν δὲ ἑκατέρα. τὰ μὲν γὰρ αὐτῶν φιλεῖ πρωῒσπορεῖσθαι, τὰ δὲ ὁψὲ διὰ τὸ μὴ δύνασθαι φέρειν τοὺς χειμῶνας, τὰ δὲ πρὸς ἀμφοτέρας τὰς ὥρας οὐ κακῶς ἔχει, καὶ πρὸς χειμῶνα καὶ πρὸς ἔαρ.

[3] Πρωῒσπορα μὲν οὖν ἐστὶ πυρὸς κριθῇ, καὶ τούτων ἡ κριθῇ πρωῒσπορώτερον· ἔτι δὲ ζειά τίφη ὀλύρα καὶ εἴ τι ἕτερον ὁμοιόπυρον· ἀπάντων γὰρ σχεδὸν ὁ αὐτὸς χρόνος τῆς σπορᾶς· τῶν δὲ χεδροπῶν μάλιστα ὡς εἰπεῖν κύαμος καὶ ὥχρος· ταῦτα γὰρ διὰ τὴν ἀσθένειαν προλαβεῖν τῇ ριζῶσει βούλεται τοὺς χειμῶνας· πρωῒσπορον δὲ καὶ ὁ θέρμος· ἀπὸ τῆς ἅλας γὰρ φασὶ δεῖν καταβάλλειν εὐθύς.

[4] Ὀψίσπορα δὲ τούτων γε αὐτῶν ὅσα διαφέρει τοῖς γένεσιν, οἷον πυρῶν τέ τι γένος καὶ κριθῶν ὃ καλοῦσι τρίμηνον διὰ τὸ ἐν τοσοῦτῳ τελειοῦσθαι· καὶ τῶν χεδροπῶν τὰ τοιάδε, φακὸς ἀφάκη πισός. ἐν ἀμφοτέραις δὲ ταῖς ὥραις τῶν χεδροπῶν, καθάπερ ὄροβος ἐρέβινθος· οἱ δὲ καὶ τὸν κύαμον ὁψὲ σπεύρουσιν, ἐὰν ὑστερήσωσι τῶν πρώτων ἀρότων. ἀπλῶς δὲ πρωῒσποροῦσι τὰ μὲν δι' ἰσχὺν ὡς δυνάμενα φέρειν τοὺς χειμῶνας, τὰ δὲ δι' ἀσθένειαν, ὅπως προλάβωσι ταῖς εὐδαίαις τὴν αὐξησιν. δύο μὲν οὖν αὗται. τρίτη δὲ τῶν θερινῶν ἦν εἵπομεν, ἐν ἣ κέγχρος σπεύρεται καὶ μέλινος καὶ σήσαμον, ἔτι δ' ἐρύσιμον καὶ ὄρμινον. χρόνοι μὲν οὖν ἐκάστων οὗτοι.

[5] Βλαστάνει δὲ τὸ μὲν θάττον τὸ δὲ βραδύτερον· καὶ κριθῇ μὲν καὶ πυρὸς ἑβδομαῖα μάλιστα· προτερεῖ δὲ ἡ κριθῇ μᾶλλον· τὰ δ' ὄσπρια τεταρταῖα ἢ

πεμπταῖα πλὴν κυάμων· κύαμος δὲ καὶ τῶν σιτωδῶν ἓνια πλείοσιν· ἐνιαχοῦ γὰρ καὶ πεντεκαίδεκαταῖος, ὅτε δὲ καὶ εἰκοσταῖος· δυσφυέστατον γὰρ τοῦτο πάντων, ἐὰν δὲ δὴ καὶ σπαρέντος ἐπὶ πλεον ὕδωρ ἐπιγένηται, καὶ παντελῶς. εἰ δὲ τῶν ἐν τοῖς ἡρινοῖς ἀρότοις θάπτον ἢ ἔκφυσις διὰ τὴν ὥραν σκεπτέον.

[6] Χρὴ δὲ τὰς ἀναβλαστήσεις καὶ τὰς διαφύσεις ταύτας ὡς ἐπὶ τὸ πᾶν διαλαβεῖν· ἐνίοτε γὰρ ἐνιαχοῦ καὶ ἐν ἐλάττοσιν ἡμέραις, καθάπερ ἐν Αἰγύπτῳ «κριθῇ»· τριταίαν γάρ φασι καὶ τεταρταίαν ἀνατέλλειν· παρ' ἄλλοις δὲ ἐν πλείοσι τῶν εἰρημένων, ὅπερ καὶ οὐκ ἄλογον, ὅταν καὶ χώρα καὶ ἀήρ διαφέρῃ καὶ πρωϊαίτερον ἢ ὀψιαίτερον ἀρόση καὶ τὰ ἐπιγινόμενα ἀνόμοια τυγχάνῃ. ἢ μὲν γὰρ μανῇ καὶ κούφῃ καὶ εὐκράτῳ ἀέρι ταχὺ καὶ ῥαδίως ἀναδίδωσιν, ἢ δὲ γλίσχρα καὶ βαρεῖα βραδέως, ἢ δὲ τοῖς τόποις αὐχμωδεστέρα βραδύτερον.

[7] Ὅτι δὲ ἂν χειμῶνες ἐπιγένωνται καὶ αὐχοὶ καὶ εὐδαίαι καὶ ἄλλιν ὕδατα· καὶ γὰρ ἐν τούτοις πολὺ παραλλάττουσιν. ὡσαύτως δὲ καὶ ἐὰν ἡ γῆ προειργασμένη καὶ κόπρον ἔχουσα τυγχάνῃ, καὶ ἐὰν μηδὲν τούτων· ἐπεὶ καὶ περὶ τὸ πρωῒσπορεῖν ἕκαστα καὶ ὀψισπορεῖν αἱ χῶραι διαφέρουσιν. ἐνιοὶ δὲ καὶ περὶ τὴν Ἑλλάδα πάντα πρωῒσπορεῖν εἰώθασιν διὰ ψυχρότητα τῆς χώρας, ὥσπερ οἱ Φωκεῖς, ὅπως ἂν οἱ χειμῶνες μὴ νήπια καταλαμβάνωσιν.

[2.1] Βλαστάνει δὲ τὰ μὲν ἐκ τοῦ αὐτοῦ τὴν ῥίζαν ἀφιέντα καὶ τὸ φύλλον, τὰ δὲ ἑκάτερον ἐξ ἑκατέρου τοῦ ἄκρου. πυρὸς μὲν οὖν καὶ κριθῇ καὶ τίφῃ καὶ ὅλως ὅσα σιτώδη πάντα ἐξ ἑκατέρου ὥσπερ ἐν τῷ στάχυϊ πέφυκεν, ἀπὸ μὲν τοῦ κάτω τοῦ παχέος τὴν ῥίζαν ἀπὸ δὲ τοῦ ἄνω τὸν βλαστὸν· ἐν δὲ τι καὶ συνεχὲς γίνεται τὸ ἀμφοῖν τῆς τε ῥίζης καὶ τοῦ καυλοῦ. κύαμος δὲ καὶ τὰ ἄλλα χεδροπὰ οὐχ ὁμοίως, ἀλλ' ἐκ τοῦ αὐτοῦ τὴν ῥίζαν καὶ τὸν καυλόν, καθ' ὃ καὶ ἢ πρόσφυσις αὐτῶν ἐστι πρὸς τὸν λοβόν, ἐν ᾧ καὶ ἔχουσιν οἶον ἀρχὴν τινα φανεράν· ἐπ' ἐνίων δὲ καὶ αἰδοιῶδες φαίνεται, καθάπερ ἐπὶ τῶν κυάμων καὶ τῶν ἐρεβίνθων καὶ μάλιστα τῶν θερμῶν· ἐκ τούτου γὰρ ἢ μὲν ῥίζα κάτω τὸ δὲ φύλλον καὶ ὁ καυλὸς ἄνω χωρεῖ.

[2] Ταύτῃ μὲν οὖν πῃ διαφέρει. τῇ δὲ ὁμοίως ἔχει τῷ πάντα κατὰ τὴν πρόσφυσιν τοῦ λοβοῦ καὶ τοῦ στάχυος ἀφιέναι τὴν ῥίζαν καὶ μὴ καθάπερ ἐν τοῖς δενδρικοῖς τισὶν ἀνάπαλιν, οἷον ἀμυγδαλῇ καρῦφ βαλάνῳ τοῖς τοιούτοις. ἐν ἅπασιν δὲ ἡ ῥίζα μικρῷ πρότερον ἐκφύεται τοῦ καυλοῦ· συμβαίνει δὲ ἐν γέ τισιν τῶν δένδρων ὥστε τὸν μὲν βλαστὸν ἐν αὐτῷ τῷ σπέρματι βλαστάνειν πρῶτον, αὐξανόμενον δὲ διίστασθαι τὰ σπέρματα - πάντα γάρ πως καὶ ταῦτα διμερῆ, τὰ δὲ δὴ χεδροπὰ φανερώς πάντα διθύρα καὶ σύνθετα - τὴν δὲ ῥίζαν εὐθὺς ἔξω προωθεῖσθαι· ἐν δὲ τοῖς σιτηροῖς διὰ τὸ καθ' ἐν αὐτὰ εἶναι τοῦτο

μὲν οὐ συμβαίνει, προτερεὶ δὲ ἡ ῥίζα μικρόν.

[3] Αναφύεται δὲ ἡ μὲν κριθὴ καὶ ὁ πυρὸς μονόφυλλα, ὁ δὲ πισὸς καὶ ὁ κύαμος καὶ ὁ ἐρέβινθος πολύφυλλα. ῥίζαν δὲ ἔχει τὰ μὲν χεδροπὰ πάντα ξυλώδη καὶ μίαν ἀπὸ δὲ ταύτης καὶ ἀποφύσεις λεπτὰς. βαθυρριζότατον δὲ ὡς εἰπεῖν τούτων ὁ ἐρέβινθος, ἐνίοτε δὲ καὶ παρακαθήσιν· ἀλλ' ὁ πυρὸς καὶ ἡ κριθὴ καὶ τὰ ἄλλα τὰ σιτώδη πολύρριζα καὶ λεπτόρριζα, δι' ὃ καὶ ταρρώδη. καὶ πολύκλαδα καὶ πολύκαυλα πάντα τὰ τοιαῦτα. σχεδὸν δὲ καὶ ἐναντίως τις ἐκατέρων ἐστί· τὰ μὲν γὰρ χεδροπὰ μονόρριζα ὄντα πολλὰς ἄνωθεν ἀπὸ τῶν καυλῶν ἀποφύσεις ἔχει πλὴν κυάμου· τὰ δὲ σιτηρὰ πολύρριζα πολλοὺς μὲν ἀνίησι βλαστούς, ἀπαράβλαστοι δὲ οὗτοι, πλὴν εἴ τι γένος πυρῶν τοιοῦτον, οὓς καλοῦσι σιτανίας καὶ κριθανίας.

[4] Τὸν μὲν οὖν χειμῶνα ἐν τῇ χλόῃ μένει τὰ σιτώδη, διαγελώσης δὲ τῆς ὥρας καυλὸν ἀφίησιν ἐκ τοῦ μέσου καὶ γονατοῦται. συμβαίνει δ' εὐθὺς ἐν τῷ τρίτῳ γόνати, τοῖς δὲ ἐν τῷ τετάρτῳ, καὶ τὸν στάχυν ἔχειν ἀλλ' οὐ φανερόν ἐν τῷ ὄγκῳ· - γίνεται δὲ ἐν τῷ ὄλῳ καλάμῳ πλείω τούτων· - ὥστε σχεδὸν ἅμα τῷ καλαμοῦσθαι συνίστασθαι «ἦ» μικρόν ὕστερον· ἀλλ' οὐ πρότερον φανερόν γίνεται πρὶν ἂν προαυξηθεῖς ἐν τῇ κάλυκι γένηται, τότε δὲ ἡ κύησις φανερά διὰ τὸν ὄγκον.

[5] Ἀπολυθεὶς δ' εὐθὺς ἀνθεῖ μεθ' ἡμέρας τέτταρας ἢ πέντε καὶ πυρὸς καὶ κριθὴ καὶ ἀνθεῖ σχεδὸν τὰς ἴσας, οἱ δὲ τὰς πλείστας λέγοντες ἐν ταῖς ἐπτά φασιν ἀπανθεῖν. ἀλλὰ τῶν χεδροπῶν χρόνιος ἡ ἄνθησις· χρονιωτάτη δὲ τῶν μὲν ἄλλων ὀρόβου καὶ ἐρεβίνθου, τούτων δ' ἀπάντων τοῦ κυάμου καὶ ἐν μεγίστῃ διαφορᾷ· τετταράκοντα γὰρ ἡμερῶν ἀνθεῖν λέγουσι· πλὴν οἱ μὲν αἰὶ παρανθοῦντος ἐτέρου καὶ ἐτέρου λέγουσι, κατὰ μέρος γὰρ ἀνθεῖν, οἱ δὲ ἀπλῶς. ἡ γὰρ ἄνθησις τῶν μὲν σταχυερῶν ἀθρόως τῶν δὲ ἐλλοβωδῶν καὶ χεδροπῶν πάντων κατὰ μέρος· πρῶτα γὰρ ἀνθεῖ τὰ κάτω, καὶ ὅταν ταῦτα ἀπανθήσῃ τὰ ἐχόμενα, καὶ οὕτως αἰεὶ βαδίζει πρὸς τὰ ἄνω. δι' ὃ πολλὰ τῶν ὀρόβων τίλλεται τὰ μὲν κάτω κατερρυηκότα τὰ δ' ἄνω χλωρὰ ἀάμπαν.

[6] Μετὰ δὲ τὴν ἀπάνθησιν ἀδρύνονται καὶ τελειοῦνται πυρὸς μὲν καὶ κριθὴ τετταρακοσταῖα μάλιστα· παραπλησίως δὲ καὶ τίφη καὶ τᾶλλα τὰ τοιαῦτα. τετταρακοσταῖον δὲ φασὶ καὶ τὸν κύαμον, ὥστε ἐν ἴσαις ἀνθεῖν καὶ τελειοῦσθαι· τὰ δ' ἄλλα ἐν ἐλάττωσιν· ἐλαχίσταις δὲ ὁ ἐρέβινθος, εἴπερ ἀπὸ τῆς σπορᾶς ἐν τετταράκοντα τελειοῦται ταῖς ἀπάσαις ὥσπερ τινές φασιν· ἐπεὶ τό γ' ὅλον ὅτι τάχιστα φανερόν. οἱ δὲ κέγχροι καὶ τὰ σήσαμα καὶ οἱ μέλινιοι καὶ ὅλως τὰ θερινὰ σχεδὸν ὁμολογεῖται τὰς τετταράκονθ' ἡμέρας λαμβάνειν·

οἱ δὲ φασι καὶ ἐλάττους.

[7] Διαφέρει δὲ καὶ πρὸς τὴν τελείωσιν χώρα τε χώρας καὶ ἀήρ ἀέρος· ἐν ἐλάττοσι γὰρ ἔναι δοκοῦσιν ἐκφέρειν, ὥσπερ ἄλλαι τε καὶ μάλιστα ἐπιδήλως Αἴγυπτος· ἐκεῖ γὰρ κριθαὶ μὲν ἐν ἑξαμῆνῳ πυροὶ δὲ ἐν τῷ ἐβδόμῳ θερίζονται· περὶ δὲ τὴν Ἑλλάδα κριθαὶ μὲν ἐν τῷ ἐβδόμῳ παρὰ δὲ τοῖς πλείστοις ὀγδόῳ, πυροὶ δὲ ἔτι προσεπιλαμβάνουσιν. οὐ μὴν οὐδὲ ἐκεῖ τό γε πᾶν πλῆθος οὕτως, ἀλλ' ὅσον εἰς ἀπαρχήν· κομίζεται γὰρ πρὸς ἱερῶν τινῶν χρεῖαν ἄλφита νέα τῷ ἔκτῳ μηνὶ καὶ ταῦτα ἐκ τῶν ἄνω τόπων ὑπὲρ Μέμφιν.

[8] Λέγεται δὲ καὶ ἐν Σικελίᾳ τῆς Μεσσηνίας ἐν ταῖς καλουμέναις Μύλαις ταχειάν τινα γίνεσθαι τὴν τελείωσιν τῶν ὀψίων· τὸν τῶν ὀσπρίων μὲν γὰρ σπορητὸν ἕξ μηνας, τὸν δὲ τῷ ὑστάτῳ σπείραντα θερίζειν ἅμα τοῖς πρώτοις· ἀγαθὴν δὲ διαφερόντως εἶναι τὴν χώραν, ὥστε τριακοντάχοα ποιεῖν, ἔχειν δὲ καὶ νομὰς θαυμαστὰς καὶ ὕλην. ἐν Μήλῳ δὲ τι θαυμασιώτερον λέγουσιν· ἐν γὰρ τριάκοντα ἢ τετταράκοντα ἡμέραις σπαρέντα θερίζουσι, δι' ὃ καὶ λέγειν αὐτοὺς ὅτι μέχρι τούτου δεῖ σπείρειν ἕως ἂν ἴδῃ τις δράγμα· γίνεσθαι δὲ οὔτε ὀσπρια τοιαῦτα οὔτε πολλὰ παρ' αὐτοῖς. δεινὴν δὲ τινα διαδοῦναι τὴν χώραν τροφήν· καὶ γὰρ εἶναι σιτοφόρον μὲν καὶ ἐλαιοφόρον ἀγαθὴν ἀμπελοφόρον δὲ μετρίαν.

[9] Ὑπερβάλλον δ' ἔτι τούτου καὶ πάντων θαυμασιώτερον τὸ περὶ Χαλκίαν τὴν νῆσον τὴν Ῥοδίων γινόμενον· ἐκεῖ γὰρ φασι εἶναί τινα τόπον πρώϊον οὕτω καὶ εὐφορον ὡς σπαρεισῶν κριθῶν ἅμα ταῖς ἄλλαις θερίσαντες ταύτας σπείρουσιν εἴτα πάλιν, εἴτα θερίζουσιν ἅμα τοῖς λοιποῖς· μεγίστη μὲν οὖν, εἴπερ ἀληθὴς, αὕτη διαφορὰ. τὸ γὰρ εἰς ἑτέραν χώραν μετενεχθέντα διαφέρειν, ὥσπερ ἐκ Κιλικίας φασὶν εἰς Καππαδοκίαν καὶ ὅλως τὴν ἐπέκεινα τοῦ Ταύρου, ἥττον ἄτοπον· φανερὰ γὰρ ἡ τῶν τόπων διάστασις.

[10] Τὸ δὲ τὴν αὐτὴν διαφορεῖν, ἐν ᾧ περ γε ἅπαξ αἱ ἄλλαι, σύνορον οὖσαν καὶ μίαν θαυμασιώτατον· αὕτη μὲν οὖν ἐν μεγίστῃ διαφορᾷ.

Τὰ δὲ κατὰ τὰς ἄλλας χώρας οὐ πολλὴν ἢ οὐδεμίαν ὡς εἰπεῖν τοῦ γε χρόνου λαμβάνει διάστασιν· προτερεῖ γὰρ ταῖς ὥραις τὰ Ἀθήνησι τῶν περὶ Ἑλλήσποντον ἡμέραις τριάκοντα μάλιστα ἢ οὐ πολλῷ πλείοσιν· εἰ μὲν οὖν καὶ ὁ σπορητὸς πρότερον, μετάθεσις ἂν εἴη τῆς ὥρας· εἰ δ' ἅμα, δῆλον ὅτι πλείων ἂν ὁ χρόνος.

[11] Οὐ μικρὰν δὲ ποιοῦσι διαφορὰν οὐδὲ οἱ τόποι, καίπερ ἔνιοι συνεγγὺς ὄντες· τὰ γὰρ ἐν Σαλαμῖνι προτερεῖ πολὺ τῶν ἄλλων τῶν ἐν τῇ Ἀττικῇ καὶ ὅλως τὰ ἐπιθαλάττια καὶ εἰς ταῦτα καὶ εἰς τοὺς ἄλλους καρπούς, ὡς τὰ περὶ

τὴν Ἀκτὴν καλουμένην τῆς Πελοποννήσου καὶ τὰ ἐν Φαλύκῃ τῆς Μεγαρίδος· πλὴν ἐνταῦθ' αὖ γε συμβάλλεται καὶ τὸ λεπτόγεων εἶναι καὶ ψαφάραν τὴν χώραν. καὶ τὰ μὲν περὶ τὴν γένεσιν καὶ τὴν τελείωσιν οὕτως ἔχει.

[3.1] Διαφέρει δὲ καθ' ὅλα τὰ γένη τὰ διηρημένα τῶν γενῶν, οἷον σῖτος χεδροπὰ τὰ θερινά, καὶ καθ' ἕκαστον γένος τὰ ὁμογενῆ. τὰ μὲν γὰρ σιτώδη τὸ φύλλον ἔχει καλάμου, τῶν δὲ χεδροπῶν τὰ μὲν περιφερέες, οἷον ὁ κύαμος καὶ σχεδὸν τὰ πλεῖστα, τὰ δὲ προμηκέστερον, οἷον ὁ πισὸς καὶ ὁ λάθυρος καὶ ὁ ὄχρος καὶ τὰ τοιαῦτα. καὶ τὰ μὲν ἰνώδη τὰ δ' ἄφλεβα καὶ ἄϊνα. τὸ δὲ σήσαμον καὶ τὸ ἐρύσιμον ἰδιώτερα παρὰ ταῦτα.

[2] Πάλιν ὁ καυλὸς τῶν μὲν γονατώδης καὶ κοῖλος, δι' ὃ καὶ καλεῖται κάλαμος· ὁ δὲ τοῦ κυάμου κοῖλος, τῶν δ' ἄλλων χεδροπῶν ξυλωδέστερος, ξυλωδέστατος δὲ ὁ ἐρέβινθος· τῶν δὲ θερινῶν κέγχρου μὲν καὶ μελίνου καλαμώδης, σησάμου δὲ καὶ ἐρυσίμου ναρθηκώδης μᾶλλον. καὶ τὰ μὲν ἐστὶν ὀρθόκαυλα, καθάπερ πυρὸς καὶ κριθῆ καὶ ὅλως τὰ σιτώδη καὶ θερινά, τὰ δὲ πλαγιόκαυλα μᾶλλον, οἷον ἐρέβινθος ὄροβος φακός, τὰ δ' ἐπιγειόκαυλα, καθάπερ ὄχρος πισὸς λάθυρος· ὁ δὲ δόλιχος, ἐὰν παρακαταπήξῃ τις ξύλα μακρά, ἀναβαίνει καὶ γίνεται κάρπιμος, εἰ δὲ μὴ, φαῦλος καὶ ἐρυσιβώδης· μόνος δ' ἢ μάλιστα τῶν χεδροπῶν ὀρθόκαυλος ὁ κύαμος.

[3] Ἔχει δὲ καὶ τὰ ἄνθη διαφορὰν καὶ τῇ φύσει καὶ τῇ θέσει, περὶ ὧν σχεδὸν ἐν τοῖς καθ' ὅλου διείλομεν, ὅτι τὰ μὲν χνοώδη, καθάπερ σίτου καὶ παντός τοῦ σταχυώδους· τὰ δὲ φυλλώδη, καθάπερ τῶν χεδροπῶν, καὶ τῶν πλείστων κολοβά· τὰ γὰρ πολλὰ κολοβανθῆ· χνοῶδες δὲ καὶ τὸ τοῦ κέγχρου καὶ μελίνου τοῦ δὲ σησάμου καὶ τοῦ ἐρυσίμου φυλλῶδες. καὶ ὅτι δὴ τὰ μὲν ἔχει περὶ αὐτὸν τὸν καρπὸν, οἷον τὰ σιτώδη καὶ κεγχρώδη περὶ τὸν στάχυν· τὰ δὲ χεδροπὰ ἐξ αὐτοῦ πως τοῦ ἄνθους ἢ ἀπὸ γε τῆς αὐτῆς ἀρχῆς γίνεται. καὶ τὴν ἄνθησιν, ὅτι τὰ μὲν ἀθρόαν τὰ δὲ κατὰ μέρος ποιεῖται· καὶ τᾶλλα δὲ τὰ παραπλήσια τούτοις.

[4] Ὅμοίως δὲ καὶ τὰ κατὰ τοὺς καρπούς, ὅτι τὰ μὲν ἔχει στάχυν, τὰ δὲ χεδροπὰ λοβόν, τὰ δὲ κεγχρώδη φόβην· ἡ δὲ καλαμώδης ἀπόχυσις φόβη. τὸ δ' ὅλον ἐναγγειόσπερμα, τὰ δὲ ἐνυμενόσπερμα, τὰ δὲ γυμνόσπερμα· καὶ ἔτι τὰ μὲν ἀκρόκαρπα, τὰ δὲ πλαγιόκαρπα, καὶ ὅσα δὴ ἄλλα ταύτης ἔχεται τῆς θεωρίας.

Ὅλως δὲ πολυκαρπότερα καὶ πολυχούστερα τὰ χεδροπά, τούτων δ' ἔτι μᾶλλον τὰ θερινὰ κέγχρος καὶ σήσαμον, αὐτῶν δὲ τῶν χεδροπῶν [5] μάλιστα φακός. ἀπλῶς δὲ τὰ μικροσπερμότερα μᾶλλον ὥς εἰπεῖν, ὥσπερ καὶ τῶν

λαχανωδῶν κύμινον ἀπάντων ὄντων πολυσπέρμων. ἰσχυρότερα δὲ πρὸς μὲν τὸν χειμῶνα καὶ ὅλως τὰ τοῦ ἀέρος τὰ σιτηρά, πρὸς δὲ τὴν τροφήν τὰ χεδροπά. τάχα δὲ τοῦτό γε ἡμῖν τοῖς ἄλλοις ἀνάπαλιν.

[4.1] Τὰ μὲν οὖν ὅλα γένη τοιαύτας ἔχει διαφοράς· τὰ δὲ ὁμογενῇ δῆλον ὅτι κατὰ τὴν τῶν μερῶν ἀνωμαλίαν, οἷον τῶν σιτωδῶν πυρὸς κριθῆς στενοφυλλότερον καὶ λειοκαυλότερον καὶ πυκνότερον καὶ γλισχρότερον ἔχει τὸν καυλὸν καὶ δυσθλαστότερον· ἅμα δὲ καὶ ὁ μὲν ἐν χιτῶσι πολλοῖς ἢ δὲ γυμνόν· μάλιστα γὰρ δὴ γυμνοσπέρματον ἢ κριθή. πολύλοπον δὲ καὶ ἡ τίφη καὶ ἡ ὀλύρα καὶ πάντα τὰ τοιαῦτα καὶ μάλιστα πάντων ὡς εἰπεῖν ὁ βρόμος. ἔστι δὲ καὶ ὑψηλότερος ὁ κάλαμος τοῦ πυροῦ ἢ τῆς κριθῆς, καὶ τὸν στάχυν ἀπηρτημένον ἔχει τοῦ φύλλου μᾶλλον ὁ πυρός.

Ἴδιον δὲ καὶ τὸ ἄχυρον τοῦ κριθίνου τὸ πύρινον· ἐγγυλότερον γὰρ καὶ μαλακώτερον. διαφέρει δὲ [2] ἡ κριθή καὶ τούτῳ τῶν πυρῶν· ἡ μὲν γὰρ στοιχειώδης, ὁ δὲ πυρὸς ἄστοιχος καὶ πανταχόθεν ὁμαλῆς τις.

Τῷ μὲν οὖν ὅλῳ γένει πρὸς γένος τοιαῦταί τινές εἰσι διαφοραί. καθ' ἐκάτερον δὲ τούτων πάλιν, οἷον πυρῶν καὶ κριθῶν, πολλὰ γένη καὶ τοῖς καρποῖς αὐτοῖς διαφέροντα καὶ τοῖς στάχυσι καὶ ταῖς ἄλλαις μορφαῖς καὶ ἔτι ταῖς δυνάμεσι καὶ τοῖς πάθεσι. τῶν μὲν κριθῶν αἱ μὲν εἰσι δίστοιχοι αἱ δὲ τρίστοιχοι αἱ δὲ τετράστοιχοι καὶ πεντάστοιχοι· πλεῖστον δ' ἐξάστοιχον, καὶ γὰρ τοιοῦτό τι γένος ἐστί. πυκνότεραι δὲ αἱ κατὰ τὴν θέσιν ὡς ἐπὶ πᾶν αἱ πολυστοιχότεραι. διαφορὰ δὲ μεγάλη καὶ τὸ παραβλαστητικὴν εἶναι, καθάπερ εἵπομεν τὴν Ἰνδικήν. καὶ οἱ στάχυες δὲ τῶν μὲν μεγάλοι καὶ μανότεροι ταῖς κριθαῖς τῶν δὲ ἐλάττους καὶ πυκνότεροι, καὶ ἀπέχοντες δὲ τοῦ φύλλου τῶν μὲν πολὺ τῶν δὲ μικρόν, ὥσπερ τῶν Ἀχιλλείων καλουμένων. καὶ αὐτῶν δὲ τῶν κριθῶν αἱ μὲν στρογγυλότεραι καὶ ἐλάττους αἱ δὲ προμηκέστεραι καὶ μεῖζους καὶ μανότεραι κατὰ τὸν στάχυν. ἔτι δὲ αἱ μὲν λευκαί, αἱ δὲ μέλαιναί καὶ ἐπιπορφυρίζουσαι, αἵπερ καὶ πολυάλφιτοι δοκοῦσιν εἶναι καὶ πρὸς τοὺς χειμῶνας δὲ καὶ τὰ πνεύματα καὶ ὅλως τὸν ἀέρα τῶν λευκῶν ἰσχυρότεραι.

[3] Πολλὰ δὲ γένη καὶ τῶν πυρῶν ἐστὶν εὐθὺς ἀπὸ τῶν χωρῶν ἔχοντα τὰς ἐπωνυμίας, οἷον Λιβυκοὶ Ποντικοὶ Θρᾶκες Ἀσσύριοι Αἰγύπτιοι Σικελοί. διαφοράς δὲ καὶ ταῖς χροιαῖς καὶ τοῖς μεγέθεσι καὶ τοῖς εἶδεσι καὶ ταῖς ιδιότησιν ἔχουσι καὶ ἐν ταῖς δυνάμεσι ταῖς τε ἄλλαις καὶ μάλιστα ταῖς πρὸς τὴν σίτησιν. τινὲς καὶ ἀπ' ἄλλων τὰς προσηγορίας, οἷον καγχρυδίας στλεγγύς Ἀλεξάνδρειος· ὧν ἀπάντων ἐν τοῖς εἰρημένοις τὰς διαφορὰς ληπτέον. οὐχ ἥκιστα δ' οἰκεῖαι εἴ τις λαμβάνοι τὰς τοιαύτας· οἷόν εἰσιν οἱ μὲν πρῶτοι οἱ δὲ

ὄφιοι, καὶ εὐαυξεῖς καὶ πολύχοι οἱ δὲ «μικροὶ» καὶ ὀλιγόχοι, καὶ μεγαλοστάχυες οἱ δὲ μικροστάχυες. καὶ οἱ μὲν ἐν κάλυκι πολὺν χρόνον οἱ δ' ὀλίγον ἐνόντες, ὥσπερ ὁ Λιβυκός. καὶ κάλαμον οἱ μὲν λεπτὸν οἱ δὲ παχύν· καὶ τοῦτο ὁ Λιβυκὸς ἔχει, παχύν δὲ καὶ ὁ καγχρυδίας. ἔτι δὲ χιτῶνας οἱ μὲν ὀλίγους οἱ δὲ πολλούς, ὥσπερ ὁ Θράκιος. καὶ ὁ μὲν μονοκάλαμος ὁ δὲ πολυκάλαμος, καὶ μᾶλλον δὲ καὶ ἤττον.

[4] Ὅμοιως δὲ καὶ εἴ τι παραπλήσιον τούτοις ἢ τοῖς πρότερον εἰρημένοις κατὰ τὰς δυνάμεις. αἱ γὰρ τοιαῦται φυσικώταται δόξαιεν ἂν εἶναι τῶν διαφορῶν. ἐν αἷς καὶ τὸ τῶν τριμήνων καὶ τὸ τῶν διμήνων καὶ εἴ τι γένος ἐν ἐλάττωσιν ἡμέραις τελειοῦται, καθάπερ φασὶν εἶναι περὶ τὴν Αἰνεΐαν, οἱ τετταράκοντα ἡμέραις ἀπὸ τῆς σπορᾶς ἀδρύνονται καὶ τέλος ἴσχουσιν· εἶναι δ' ἰσχυρὸν τοῦτον καὶ βαρὺν οὐχ ὥσπερ τὸν τρίμηνον κοῦφον, δι' ὃ καὶ τοῖς οἰκέταις παρέχειν, καὶ γὰρ οὐδὲ πίτυρον ἔχειν πολὺ. σπανιώτατος μὲν οὖν καὶ τάχιστος εἰς τελείωσιν οὗτος. εἰσὶ δὲ καὶ διμήνηοι τινες οἵπερ καὶ ἐκ Σικελίας ἐκομίσθησαν εἰς Ἀχαΐαν· ὀλιγοχόοι δὲ καὶ ὀλιγογόνοι καὶ κοῦφοι κατὰ τὴν προσφορὰν καὶ ἡδεῖς. καὶ ἄλλοι δὲ τινες οἱ περὶ Εὐβοίαν εἰσὶ καὶ μάλιστα ἐν τῇ Καρυστίᾳ. τρίμηνοι δὲ πολλοὶ καὶ πανταχοῦ κοῦφοι οὗτοι καὶ ὀλιγοχόοι καὶ μονοκάλαμοι κατὰ τὴν ἔκφυσιν καὶ τὸ ὅλον [5] ἀσθενεῖς. κουφότατος μὲν οὖν ὡς ἀπλῶς εἰπεῖν πυρὸς ὁ Ποντικός· βαρύτερος δὲ τῶν εἰς τὴν Ἑλλάδα παραγινομένων ὁ Σικελός· τούτου δ' ἔτι βαρύτερος ὁ Βοιωτός· σημεῖον δὲ λέγουσιν ὅτι οἱ μὲν ἀθληταὶ ἐν τῇ Βοιωτίᾳ τρί' ἡμιχοίνικα μόλις ἀναλίσκουσιν, Ἀθήναζε δὲ ὅταν ἔλθωσι πένθ' ἡμιχοίνικα ῥαδίως. κοῦφος δὲ καὶ ὁ ἐν τῇ Λακωνικῇ. τούτων μὲν οὖν ἐν τε ταῖς χώραις καὶ τῷ ἀέρι τὸ αἷτιον· ἐπεὶ καὶ περὶ τὴν Ἀσίαν οὐ πόρρω Βάκτρων ἐν μὲν τινὶ τόπῳ οὕτως ἀδρὸν εἶναι φασὶ τὸν σῖτον ὥστε πυρῆνος ἐλαίας μέγεθος λαμβάνειν, ἐν δὲ τοῖς Πισσάτοις καλουμένοις οὕτως ἰσχυρὸν ὥστ' εἰ τις πλεῖον προσενέγκοιτο διαρρήγνυσθαι, καὶ τῶν Μακεδόνων καὶ πολλοὺς τοῦτο παθεῖν. ἄτοπον δὲ καὶ ἀνομολογούμενον πρὸς τὴν τῶν τριμήνων κουφότητα τὸ περὶ τοὺς Ποντικούς συμβαῖνον· εἰσὶ γὰρ οἱ μὲν σκληροὶ ἡρινοὶ οἱ δὲ μαλακοὶ χειμερινοί· πολὺ γὰρ διαφέρει τῇ κουφότητι ὁ [6] μαλακός. [ὁμοίως δὲ καὶ δύο ἄρότους ὡς ἔοικε παντὸς τοῦ σίτου ποιοῦνται, τὸν μὲν χειμερινὸν τὸν δὲ ἡρινόν, ἐν ᾧ καὶ τὰ ὄσπρια καταβάλλουσιν].

Εἰσὶ δὲ καὶ οἱ μὲν καθαροὶ αἰρῶν, ὥσπερ ὁ Ποντικός καὶ ὁ Αἰγύπτιος· καθαρὸς δὲ ἐπιεικῶς καὶ ὁ Σικελός καὶ μάλιστα ὁ Ἀκραγαντῖνος οὐκ αἰρώδης.

Ὁ δὲ Σικελὸς ἴδιον ἔχει τὸ μελάμπυρον καλούμενον, ὃ ἐστὶν ἀβλαβὲς καὶ

οὐχ ὥσπερ ἡ αἶρα βαρὺ καὶ κεφαλαλγές. ἀλλὰ τὰ μὲν τοιαῦτα, καθάπερ ἐλέχθη, ταῖς χώραις ἀναθετέον καὶ ὅσον ἐπιβάλλει τοῖς γένεσιν.

[5.1] Ἐν δὲ τοῖς ὀσπρίοις οὐχ ὁμοίως ἐστὶ λαβεῖν τὰς τοιαύτας διαφοράς, εἴτ' οὖν διὰ τὸ μὴ ἐξετάζειν ὁμοίως εἴτε καὶ διὰ τὸ μονοειδέστερα τυγχάνειν· ἔξω γὰρ ἐρεβίνθου καὶ φακοῦ καὶ ἐπ' ὀλίγου κυάμου καὶ ὀρόβου, καθ' ὅσον ἡ τῶν χρωμάτων καὶ τῶν χυλῶν διαφορά, τῶν γ' ἄλλων οὐ ποιοῦσιν ιδέας. οἱ δὲ ἐρέβινθοι καὶ τοῖς μεγέθεσι καὶ τοῖς χυλοῖς καὶ τοῖς χρώμασι καὶ ταῖς μορφαῖς διαφέρουσιν, οἷον κριοὶ ὀροβιαῖοι οἱ ἀνὰ μέσον. ἐπὶ πᾶσι δὲ τὰ λευκὰ γλυκύτερα· καὶ γὰρ ὁ ὀροβος καὶ φακὸς καὶ ἐρέβινθος καὶ κύαμος καὶ σήσαμον· ἔστι γὰρ καὶ σήσαμον λευκόν.

[2] Ἀλλὰ μᾶλλον ἐν τοῖς τοιοῖσδε ποιεῖν ἐστὶ τὰς διαφοράς οἷον, ἐπεὶ πάντα ταῦτ' ἔλλοβα, τὰ μὲν αὐτῶν ἀδιάφρακτα καὶ ὥσπερ συμψάοντα τυγχάνει, καθάπερ ὀροβος πισὸς καὶ σχεδὸν τὰ πλεῖστα, τὰ δὲ διαπεφραγμένα, καθάπερ θέρμος, ἔτι δὲ μᾶλλον καὶ ιδίως τὸ σήσαμον. καὶ τὰ μὲν μακρόλοβα τὰ δὲ καὶ στρογγυλόλοβα, καθάπερ ὁ ἐρέβινθος. ἀνὰ λόγον δ' ἀκολουθεῖ καὶ τὰ πλήθη τῶν σπερμάτων· ἐλάττω γὰρ ἐν τοῖς μικροῖς, ὥσπερ ἐν τε τῷ τῶν ἐρεβίνθων καὶ ἐν τῷ τῶν φακῶν.

[3] Καὶ παραπλήσια δὲ ἴσως αἱ τοιαῦται καὶ ἅς ἐπὶ τῶν σιτηρῶν ἐλέγομεν περὶ τῶν σταχύων καὶ αὐτῶν τῶν καρπῶν· ἐπεὶ καὶ οἱ καλούμενοι λοβοὶ σχεδὸν ἀκόλουθοι τοῖς σπέρμασιν εἰσιν, οἱ μὲν ἐπιπλατεῖς, ὥσπερ οἱ τοῦ φακοῦ καὶ τῆς ἀφάκης, οἱ δὲ κυλινδρώδεις μᾶλλον, ὡς οἱ τοῦ ὀρόβου καὶ τοῦ πισοῦ· τὰ γὰρ σπέρματα ἐκατέρων τοιαῦτα τοῖς σχήμασι· ἀλλὰ τὰς μὲν τοιαύτας διαφοράς πολλὰς ἂν τις εὔροι καθ' ἕκαστον, ὧν αἱ μὲν κοιναὶ πᾶσιν αἱ δὲ ἴδιαι κατὰ γένος.

[4] Ὅτι δὲ πάντα προσπέφυκε τοῖς λοβοῖς καὶ ἔχει καθάπερ ἀρχὴν τινα, τὰ μὲν προέχουσιν, ὥσπερ ὁ κύαμος καὶ ὁ ἐρέβινθος, τὰ δὲ καὶ ἔγκοilon, ὥσπερ θέρμος καὶ ἄλλ' ἅττα, τὰ δὲ οὕτω μὲν οὐ φανεράν ἐλάττω δὲ καὶ ὥσπερ ἀποσημαίνουσιν μόνον, δῆλον μὲν ἀπὸ τῆς ὁψεως· ἐξ ἧς καὶ ὅταν σπαρῇ βλαστάνει καὶ ρίζοῦται, καθάπερ ἐλέχθη, κατ' ἀρχὰς δὲ καὶ αὐτὰ τρέφεται προσηρημένα τῷ λοβῷ, μέχρι οὗ ἂν τελειωθῇ· φανερόν δέ ἐστι καὶ ἐκ τῶν νῦν καὶ ἐκ τῶν προειρημένων. περὶ μὲν οὖν τῶν κατὰ τὰς διαφοράς ἄλλας.

[6.1] Σπείρειν δὲ ξυμφέρει πάντα μάλιστα μὲν ἐν τοῖς ὠραίοις ἀρότοις· οὐ μὴν ἀλλὰ καὶ ἐν ξηρᾷ τινες καταβάλλουσι καὶ οὐχ ἥκιστα πυροὺς καὶ κριθὰς ὡς μάλιστα αὐταρκεῖν δυνάμενα, ὅπου μὴ ὄρνισιν ἢ ἄλλοις θηρίοις ἐπισινης ἡ χώρα. δοκεῖ γὰρ ὡς ἐπὶ πᾶν ὁ πρῶτος ἄροτος ἀμείνων εἶναι, χερίστος δὲ

σπόρος ἐν ταῖς ἡμιβρόχοις· ἀπόλλυται γὰρ καὶ ἐγκαλακτοῦται τὰ σπέρματα, καὶ ἅμα ξυμβαίνει πῶς ἀναφύεσθαι πολλήν. μετὰ δὲ τὴν σπορὰν ὕδωρ ἐπιγίνεσθαι πᾶσι ξυμφέρει, πλὴν ὅσα δυσβλαστῇ γίνεται μᾶλλον, ὥσπερ ὁ τε κύαμος δοκεῖ καὶ τῶν θερινῶν σήσαμον καὶ κύμινον καὶ ἐρύσιμον.

[2] Πυκνοσπορεῖν δὲ καὶ μανοσπορεῖν καὶ πρὸς τὰς χώρας βλέποντα χρή· πλεῖον γὰρ ἢ πείρα καὶ ἀγαθὴ δύναται φέρειν τῆς ὑφάμμου τε καὶ λεπτῆς. καίτοι λέγεται τις λόγος ὡς ὅτε μὲν πλεον ὅτε δὲ ἔλαττον ἢ αὐτὴ δέχεται χώρα· καὶ οἰωνίζονται τὸ πλεον ὡς οὐκ ἀγαθόν, πεινῇ γὰρ εὐθύς φασὶ τὴν γῆν· οὗτος μὲν οὖν ἴσως εὐηθέστερος λόγος. εἰ δὲ τις πρὸς τὰ σπέρματα θεωροίη καὶ μάλιστα γε πρὸς αὐτοὺς τοὺς τόπους ἅμα τῷ ἐδάφει καὶ τὴν θέσιν ἀναθεωρῶν τὴν γε πρὸς τὰ πνεύματα καὶ τὸν ἥλιον, οἰκειότερον ἂν λαμβάνοι τὰς διαφοράς.

[3] Ἀνὰ λόγον δὲ ἔχει καὶ ἡ κόπρις τοῖς σπόροις πρὸς τὰς χώρας· νειὸς δ' ἀμείνων ἢ χειμέριος τῆς ἐαρινῆς. ἐνιαχοῦ δὲ οὐ ξυμφέρειν βαθεῖαν ἀροτριάν, ὥσπερ καὶ ἐν Συρίᾳ, δι' ὃ μικροῖς ἀρότροις χρῶνται. παρ' ἄλλοις δὲ τὸ λίαν ἐξεργάζεσθαι βλάπτει, καθάπερ ἐν Σικελίᾳ, δι' ὃ καὶ τῶν ξένων ὡς ἔοικε πολλοὶ διαμαρτάνουσι. πάντα μὲν οὖν πρὸς τὰς χώρας.

[4] Διαιροῦσι δὲ καὶ τὰ σπέρματα ποῖα ποῖον πρόσφορον· ἐν γὰρ ταῖς χειμεριναῖς πυρὸν μᾶλλον ἢ κριθήν, καὶ ὅλως σῖτον ἢ χεδροπὰ κελεύουσιν ἐν ταῖς χέρσοις καὶ διὰ χρόνου κινουμέναις· καὶ γὰρ αὗται πυρὸν φέρουσι μᾶλλον ἢ κριθήν. δέχεται δὲ καὶ ἐπομβρίαν μᾶλλον πυρὸς τῆς κριθῆς, καὶ ἐν τοῖς ἀκόπροις φέρει μᾶλλον. ὡσαύτως δὲ καὶ αὐτῶν τῶν πυρῶν ποῖος τῇ ποίᾳ πρόσφορος, οἷον ἀγαθῇ καὶ πειρά καὶ ψαφαρᾷ καὶ λεπτῇ «καὶ» ταῖς ἄλλαις ὁμοίως.

[5] Ὑδωρ δὲ ὅταν μὲν χλοηφορήσῃ καὶ κυήσῃ πλεῖον ἅπασιν ξυμφέρει· ἀνθοῦσι δὲ πυροῖς μὲν καὶ κριθαῖς καὶ τοῖς σιτώδεσι βλαβερὸν· ἀπόλλυσι γάρ· ὅσπριοις δ' ἀβλαβεῖς πλὴν ἐρεβίνθων· οὗτοι γὰρ ἀποκλυσθείσης τῆς ἄλμης ἀπόλλυνται σφακελίζοντες καὶ ὑπὸ καμπῶν κατεσθιόμενοι· ἰσχυρότερος δὲ ὁ μέλας ἐρέβινθος καὶ ὁ πυρρὸς τοῦ λευκοῦ· συμφέρει δέ, φασίν, ἐν τοῖς ἐφύδροις τόποις ὅπῃ σπεῖρειν αὐτόν. κύαμος δὲ ἀνθῶν μάλιστα φιλεῖ βρέχεσθαι, δι' ὃ καὶ οὐκ ἐθέλουσιν ὀπισπορεῖν, ὥσπερ εἵπομεν, ὅτι πολὺν ἀνθεῖ· μετὰ δὲ τὴν ἀπάνθησιν ὀλίγου πάμπαν ὕδατος δεῖται· σύνεγγυς γὰρ ἢ τελείωσις. ἀλλ' ὅταν ἀδρυνθῇ καὶ βλάπτειν δοκεῖ τὰ σιτώδη καὶ κριθήν δὲ πυροῦ μᾶλλον.

[6] Ἐν Αἰγύπτῳ δὲ καὶ Βαβυλῶνι καὶ Βάκτροις, ὅπου μὴ ὕεται ἡ χώρα «ἢ»

σπανίως, αἱ δρόσοι τὸ ὅλον ἐκτρέφουσιν. ἔτι καὶ οἱ περὶ Κυρήνην καὶ Εὐεσπερίδας τόποι. καιριώτατα δὲ πᾶσιν ὡς ἀπλῶς εἰπεῖν τὰ ἡρινά· δι' ὃ καὶ ἡ Σικελία πολύσιτος· πολλὰ γὰρ τοῦ ἥρος καὶ μαλακὰ γίνεται, τοῦ δὲ χειμῶνος ὀλίγα. ζητεῖ δὲ ἡ μὲν λεπτόγεως πολλὰ κατὰ μικρόν· ἡ δὲ πείρα καὶ πληθος μὲν ἐνεγκεῖν δύναται καὶ αὐδρίαν - πρὸς δὲ τὴν χώρας αὐδρίαν πόντια πνεύματα καὶ αὔραι δοκοῦσι ξυμφέρειν, ἄλλα δὲ παρ' ἄλλοις τοιαῦτα, καθάπερ καὶ πρότερον εἴρηται, - ὡς ἐπὶ τὸ πᾶν δὲ μᾶλλον αὐχμὸς ἢ ἐπομβρία ξυμφέρει τῷ σίτῳ· [7] οἱ γὰρ ὄμβροι καὶ ἄλλως ἐναντίοι καὶ πολλάκις αὐτὰ τὰ σπέρματα διαφθεύουσιν, εἰ δὲ μὴ πληθὸς γε ποιοῦσι βοτάνης, ὥστε καταπνίγεσθαι καὶ ἀτροφεῖν.

[7.1] Τῶν μὲν οὖν ἄλλων σπερμάτων οὐδὲν εἰς ἄλλο πέφυκε μεταβάλλειν φθειρόμενον, πυρὸν δὲ καὶ κριθὴν εἰς αἶραν φασὶ καὶ μᾶλλον τὸν πυρόν, γίνεσθαι δὲ τοῦτ' ἐν ταῖς ἐπομβρίαις καὶ μάλιστα ἐν τοῖς εὐύδροις καὶ ὀμβρώδεσι χωρίοις. ὅτι δ' οὐκ ἔστιν ἡρινὸν ἢ αἶρα καθάπερ ἡ ἄλλη πόα, πειρῶνται γὰρ τινες τοῦτο λέγειν, ἐκεῖθεν δῆλον· εὐθύς γὰρ τοῦ χειμῶνος φανερά γίνεται πεφυκυῖα· καὶ διαφέρει πολλοῖς· ἔχει γὰρ τὸ φύλλον στενὸν καὶ δασὺ καὶ λιπαρόν, καὶ τούτων ιδιότατον τὸ λιπαρόν· ἡ γὰρ δασύτης καὶ τοῖς τοῦ αἰγίλωπος ὑπάρχει, ἀλλ' ἐκφανὴς γίνεται ἐπὶ τοῖς τοῦ αἰγίλωπος τοῦ ἥρος. τοῦτο μὲν οὖν ἴδιον τούτων, καὶ ἔτι τοῦ λίνου· καὶ γὰρ ἐκ τούτου φασὶ γίνεσθαι τὴν αἶραν.

[2] Τοῦ δὲ ἐρεβίνθου πρὸς τὰ ἄλλα χεδροπὰ τὸ τε περὶ τὴν ἄνθησιν λεχθὲν καὶ τὸ τάχιστα τελειοκαρπεῖν ἰσχυρότατον ὄν καὶ ξυλωδέστατον, καὶ τὸ ὅλον μὴ ποιεῖν νειὸν <ὡς> καρπιζόμενον· τὴν δὲ πόαν ἐξαπόλλυσι καὶ μάλιστα δὲ καὶ τάχιστα τὸν τρίβολον. ὅλως δὲ οὐδὲ ἡ τυχοῦσα δύναται φέρειν αὐτόν, ἀλλὰ μελάγγειόν τινα δεῖ καὶ πείραν εἶναι. τῶν δὲ ἄλλων ἡ ἀρίστη νειὸς ἀπὸ τῶν κυάμων καίπερ πυκνοσπορουμένων καὶ πολὺν καρπὸν φερόντων.

[3] Τὰ δὲ ἐν τοῖς θερινοῖς ἀρότοις ὀλίγου δεῖ πάντα, φασὶ δὲ καὶ τὰ ναματιαῖα συμφέρειν μᾶλλον αὐτοῖς τῶν ἐκ διός, μέλινοι δὲ καὶ κέγχροι ἐλάττους ὕδατος· ἐὰν γὰρ ἔχωσι πλεῖον φυλλοβολοῦσιν. ἰσχυρότερον δὲ ὁ κέγχρος· οἱ δὲ μέλινοι γλυκύτεροι καὶ ἀσθενέστεροι. σήσαμον δὲ οὐδὲν <ζῶον> ἐσθίει χλωρόν οὐδὲ θερμόν. εἰ δὲ μὴδ' ἐρύσιμον μὴδὲ ὄρμινον σκεπτέον· καὶ ταῦτα πικρά. ἔστι δὲ τὸ μὲν ἐρύσιμον ὅμοιον σησάμῳ καὶ λίπος ἔχει· τὸ δὲ ὄρμινον κυμινῶδες μέλαν· σπείρεται δὲ ἅμα καὶ τὸ σήσαμον. περὶ μὲν οὖν τούτων σκεπτέον.

[4] Ἐν δὲ ταῖς ἀγαθαῖς χώραις πρὸς τὸ μὴ φυλλομανεῖν ἐπινέμουσι καὶ

ἐπικείρουσι τὸν σῖτον, ὥσπερ καὶ ἐν Θετταλίᾳ. συμβαίνει δ' ἂν μὲν ἐπινέμωσιν ὀποσακισὺν μηδὲν ἀλλοιοῦσθαι τὸν καρπὸν, ἂν δὲ ἐπικείρῳσιν ἅπαξ μόνον ἐξίστασθαι τὸν πυρὸν καὶ γίνεσθαι μακρὸν καὶ οὐχ ἄδρόν, ὃν καλοῦσι καμακίαν, καὶ οὐκ ἀποκαθίστασθαι πάλιν σπειρόμενον· τοῦτο μὲν οὖν ὡς παύροις συμβαῖνον Θετταλοι λέγουσιν. ἐν Βαβυλῶνι δὲ ἀεὶ καὶ ὥσπερ τεταγμένως ἐπικείρουσι μὲν δίς, τὸ δὲ τρίτον τὰ πρόβατα ἐπαφιᾷσιν· οὕτω γὰρ φύει τὸν καυλόν, εἰ δὲ μὴ φυλλομανεῖ· γίνεται δὲ μὴ καλῶς ἐργασαμένοις πεντηκονταχόα, τοῖς δὲ ἐπιμελῶς ἑκατονταχόα. ἡ δὲ ἐργασία τὸ ὡς πλεῖστον χρόνον ἐμμένειν τὸ ὕδωρ, ὅπως ἰλὺν ποιήσῃ πολλήν· πίειραν γὰρ οὕσαν καὶ πυκνήν τὴν γῆν δεῖ ποιῆσαι μανήν. ὕλην δὲ οὐ φέρει καὶ πόαν ὥσπερ ἐν Αἰγύπτῳ. τὰ μὲν οὖν τοιαῦτα χώρας ἀρετῆς.

[5] Φύεται δὲ καὶ ἀπὸ ῥιζῶν πυρὸς καὶ κριθῇ πολλαχοῦ τῷ ὑστέρω ἔτει· αὐτοετῆς δὲ καὶ ἀπὸ τῶν εἰς κράστιν κειρομένων ἐτέρου καλάμου παραβλαστάνοντος. ὡσαύτως δὲ καὶ ὑπὸ χειμῶνος ἐκπαγῇ· παραβλαστάνει γὰρ ὑδάτων ἐπιγινομένων· ὁ δὲ στάχυς ἀτελὴς καὶ μικρὸς ἀπὸ τῶν τοιούτων. βλαστάνουσι δὲ τῷ ὑστέρω ἔτει καὶ ἀπὸ τῶν καταπονουμένων καὶ συμπατουμένων, ὥστε μηδὲν εἶναι δῆλον ὡς εἰπεῖν, οἷον ὅταν διέλθῃ στρατόπεδον, καὶ οἱ στάχυες μικροὶ καὶ τούτων, οὓς καλοῦσιν ἄρνας· τῶν δὲ χεδροπῶν οὐδὲν δύναται τοιοῦτον ποιεῖν ἢ οὐχ ὁμοίως. καὶ αἱ βλαστήσεις τοσαυταχῶς.

[6] Πρὸς αὐξήσιν δὲ καὶ τροφήν μέγιστα μὲν ἡ τοῦ ἀέρος κρᾶσις συμβάλλεται, καὶ ὅλως ἡ τοῦ ἔτους κατάστασις· εὐκαίρων γὰρ ὑδάτων καὶ εὐδιδῶν καὶ χειμῶνων γινομένων ἅπαντα εὐφορα καὶ πολύκαρπα, καὶ ἐν ἀλμώδεσι καὶ λεπτογείοις ἤ· δι' ὃ καὶ παροιμιαζόμενοι λέγουσιν οὐ κακῶς ὅτι “ἔτος φέρει οὐχὶ ἄρουρα.”

Μέγα δὲ καὶ αἱ χῶραι διαφέρουσιν οὐ μόνον τῷ πίειραι καὶ λεπταὶ καὶ ἔπομβροι καὶ αὐχμώδεις εἶναι· ἀλλὰ καὶ τῷ ἀέρι τῷ περιέχοντι καὶ τοῖς πνεύμασιν· ἔναι γὰρ οὔσαι λεπταὶ καὶ φαῦλαι τελεσφοροῦσι διὰ τὸ πρὸς τὰ πνεύματα τὰ πόντια [7] κεῖσθαι καλῶς. ἄλλα δὲ ἄλλαις τοιαῦτα, καθάπερ πολλάκις εἴρηται· ταῖς μὲν γὰρ τὰ ζεφυρικὰ ταῖς δὲ τὰ βόρεια ταῖς δὲ τὰ νότια.

Συμβάλλεται δὲ καὶ οὐ μικρὰ ἡ ἐργασία καὶ μάλισθ' ἡ «πρὸ» τοῦ σπόρου· κατεργασθεῖσα γὰρ ῥαδίως ἐκφέρει. καὶ ἡ κόπρος δὲ μεγάλη βοηθεῖ τῷ διαθερμαίνειν καὶ συμπέττειν· προτρέπει γὰρ τὰ κοπιζόμενα τῶν ἀκόπρων καὶ εἴκοσιν ἡμέραις· ἅπασι δὲ οὐ ξυμφέρει· καὶ χρήσιμος οὐ μόνον τοῖς περὶ τὸν σῖτον ἀλλὰ καὶ τοῖς ἄλλοις πλὴν πτερίδος, ταύτην δὲ φθείρειν φασὶν

ἐπιβαλλομένην. ἀπόλλυται δὲ ἡ πτερίς καὶ ἐπικοιμωμένων τῶν προβάτων, ὥς δὲ τινες λέγουσι καὶ ἡ Μηδικὴ διὰ τὴν κόπρον καὶ τὸ οὖρον.

[8.1] Τῶν δὲ σπερμάτων ἕκαστα καὶ πρὸς τὴν τῆς χώρας φύσιν ἀρμόττει, καὶ ὅλως γένη πρὸς γένος καὶ ἐν αὐτοῖς τοῖς ὁμογενέσιν, ἃ δὴ πειρῶνται διαιρεῖν. μεταβάλλει δὲ τὰ ξενικὰ τῶν σπερμάτων μάλιστα μὲν ἐν τρισὶν ἔτεσιν εἰς τὰ ἐπιχώρια. συμφέρει δὲ ἐκ τῶν ἀλεεινῶν εἰς τὰ μικρὸν ἥττον ἀλεεινὰ καὶ ἐκ τῶν ψυχρινῶν ἀνὰ λόγον ποιεῖσθαι τὴν μεταβολήν. τὰ δ' ἐκ τῶν δυσχειμερινῶν ἐν τοῖς πρώτοις ὀψὲ ἀποχεῖται, ὥστ' ἀπ' αὐχμοῦ φθείρεται, ἐὰν μὴ ὄψιον ὕδωρ σώσῃ. διὰ τοῦτο καὶ εὐλαβητέον φασὶ τὸ μίσγειν τὰ ξενικὰ τοῖς ἐπιχωρίοις ἐὰν μὴ ἐξ ὁμοίας, ὅτι ἀσύμφωνα τῇ χώρᾳ κατὰ τὸν σπόρον καὶ κατὰ τὴν γένεσιν, ὥστε καὶ ἐργασίας ἐτέρας δεῖται· τὰς τε τῆς γῆς διαφορὰς καὶ τὰς τῶν σπερμάτων δυνάμεις καὶ ἔτι τὰς ἐκάστων ὥρας.

[2] Ὅταν δὲ εὐετηρία γένηται, καὶ πολυνοστότερα τὰ σπέρματα γίνεται. Ἀθήνησι γοῦν αἱ κριθαὶ τὰ πλεῖστα ποιοῦσιν ἄλφιτα· κριθοφόρος γὰρ ἀρίστη· τοῦτο δ' οὐχ ὅταν πλεῖσται γένωνται ἀλλ' ὅταν λάβῃ τινὰ κρᾶσιν. ἐν δὲ τῇ Φωκίδι περὶ Ἐλάτειαν οἱ πυροὶ ποιοῦσιν ἡμιόλια τὰ ἄλευρα, καὶ ἐν Σόλοις τῆς Κιλικίας καὶ οἱ πυροὶ καὶ αἱ κριθαί· καὶ παρ' ἄλλοις ἄλλα πρὸς ἅπερ εὐφυῆς ἐκάστη. βελτίω μὲν οὖν καὶ χεῖρω τὰ σπέρματα καὶ διὰ τὴν ἐργασίαν καὶ διὰ τὴν γῆν γίνεται· καὶ γὰρ ἀπαγριοῦται καὶ ἡμεροῦται, καθάπερ τὰ δένδρα· καὶ ὅλως μεταβάλλει «κατὰ» τὴν χώραν, ὥσπερ τινὰ τῶν δένδρων εὐθὺς ἔστηκε πρὸς τὸ χεῖρον.

[3] Γένος δ' ὅλον ἐξαλλάττειν εἰς ἕτερον οὐδὲν ἄλλο πέφυκε πλὴν τίφῃ καὶ ζεῖᾳ, καθάπερ εἶπομεν ἐν τοῖς πρώτοις λόγοις, καὶ ἡ αἶρα δ' ἐκ τῶν πυρῶν καὶ κριθῶν διαφθειρομένων· ἢ εἰ μὴ τοῦτο ἀλλὰ φιλεῖ γε μάλιστα ἐν τοῖς πυροῖς γίνεσθαι, καθάπερ καὶ ὁ μελάμπυρος ὁ Ποντικός καὶ τὸ τῶν βολβῶν σπέρμα, καὶ ἄλλα δὲ ἐν ἄλλοις τῶν σπερμάτων· ἐπεὶ καὶ ὁ αἰγίλωψ δοκεῖ μᾶλλον ἐν ταῖς κριθαῖς, ἐν δὲ τοῖς φακοῖς ἄρακος τὸ τραχὺ καὶ σκληρόν, ἐν δὲ ταῖς ἀφάκαις ὁ πελεκῖνος ὁμοῖον τῇ ὧσιν τῷ πελέκει· σχεδὸν δὲ καθ' ἕκαστόν ἐστι τὸ συνεκτρεφόμενον καὶ συναναμιγνύμενον εἴτε διὰ τὰς χώρας, ὅπερ οὐκ ἄλογον, [4] εἴτε δι' ἄλλην τινὰ αἰτίαν. ἔνια δὲ καὶ φανερώς ἐστι κοινὰ πλειόνων, ἀλλὰ διὰ τὸ μάλιστα ἐν τισιν εὐθeneῖν ἴδια τούτων φαίνεται, καθάπερ ἡ ὀροβάγχῃ τῶν ὀρόβων καὶ ἡ ἀπαρίνη τῶν φακῶν· ἀλλὰ ἡ μὲν μάλιστα ἐπικρατεῖ τῶν ὀρόβων διὰ τὴν ἀσθένειαν· ἡ δὲ ἀπαρίνη μάλιστα ἐν τοῖς φακοῖς εὐτροφεῖ· τρόπον δέ τινα καὶ παραπλήσιόν ἐστι τῇ ὀροβάγχῃ «τῷ» ἐπιβάλλειν καὶ κατέχειν ὅλον ὥσπερ πλεκτάναις· ἀποπνίγει γὰρ οὕτως, ὅθεν

καὶ τοῦνομα εἴληφε.

[5] Τὸ δ' ὑποφούμενον εὐθὺς ἐκ τῆς ρίζης τῷ κυμίνῳ καὶ τῷ βουκέρῳ τὸ αἰμόδωρον καλούμενον μᾶλλον ἰδίᾳ. ἔστι δὲ τὸ αἰμόδωρον μονόκαυλον οὐκ ἀπεμφερές [τῷ καυλῷ], πλὴν βραχύτερόν τε πολὺ, καὶ ἄνωθέν τι κεφαλῶδες ἔχει ρίζαν δὲ ὑποστρόγγυλον· οὐθὲν δὲ ἕτερον ἀφαναίνεται παρὰ τὸ βούκερας. γίνεται δὲ ταῦτα ἐν ταῖς λεπταῖς οὐκ ἐν ταῖς πιείραις, ὥσπερ καὶ τῆς Εὐβοίας ἐν τῷ Αἰγλαντῷ μὲν οὐ γίνεται περὶ δὲ τὸν Κάνηθον καὶ εἴ τις ἄλλος τοιοῦτος τόπος. ταῦτα μὲν οὖν κοινὰ πλειόνων ὄντα κατισχύει μᾶλλον ἐν τοῖς εἰρημένοις διὰ τὴν ἀσθένειαν.

[6] Τὸ δὲ τέραμον καὶ ἀτεράμον λέγεται μὲν ἐπὶ τῶν ὀσπρίων μόνον, οὐκ ἄλογον δὲ καὶ ἐπὶ τῶν σιτωδῶν παραπλήσιον ἢ καὶ ταυτό τι συμβαίνειν, ἀλλὰ διὰ τὸ μὴ τὴν αὐτὴν εἶναι χρεῖαν οὐχ ὁμοίως ἐμφανές· ἐπεὶ οὐδ' ἐπὶ τούτων ἀπάντων ὁμοίως ἀλλὰ μάλιστα ἐπὶ τῶν κύαμων λέγεται καὶ φακῶν, εἴτ' οὖν καὶ μάλιστα πασχόντων εἴτε καὶ διὰ τὴν χρεῖαν φαινομένων. γίνεται γοῦν πλεοναχῶς· πολλαχοῦ γὰρ τόποι τινές εἰσιν οἱ αἰεὶ φέρουσι τεράμονα καὶ ἄλλοι πάλιν ἀτεράμονα· τὸ δὲ ὡς ἐπὶ πᾶν οἱ λεπτόγεω μᾶλλον [7] τεράμονα· καὶ ἄερος κατάστασις τις ποιεῖ τὴν τοιαύτην παραλλαγὴν· σημεῖον δὲ ὅτι ταῦτα χωρία καὶ ὁμοίως ἐργασθέντα φέρει ποτὲ μὲν τεράμονα <ποτὲ δὲ ἀτεράμονα.> περὶ Φιλίππους δὲ ὁ κύαμος λικμώμενος, ἐὰν ὑπὸ πνεύματος ἐγχωρίου ληφθῇ, τεράμων ὦν ἀτεράμων γίνεται. ταῦτα μὲν οὖν μηνύει διότι πολλαχῶς τῶν αὐτῶν χωρίων ἔνια σύνορα καὶ ὁμοίως κατήμενα καὶ οὐδεμίαν ἔχοντα κατὰ τὴν γῆν διαφορὰν τὸ μὲν τεράμονα τὸ δ' ἀτεράμονα φέρει, καὶ ἐνίοτε μόνον αὐλακος διορίζουσας.

[9.1] Καρπίζεται τὴν γῆν μάλιστα πυρὸς εἶτα κριθή, δι' ὃ καὶ ὁ μὲν ἀγαθὴν ζητεῖ χώραν ἢ δὲ κριθή δύναται καὶ ἐν ταῖς ψαφαρωτέραις ἐκφέρειν· τῶν δὲ χεδροπῶν μάλιστα ἐρέβινθος καίπερ ἐλάχιστον χρόνον ἐν τῇ γῇ μένων, ὁ δὲ κύαμος, ὥσπερ ἐλέχθη, καὶ ἄλλως οὐ βαρὺ καὶ ἔτι κοπρίζειν δοκεῖ τὴν γῆν διὰ μανότητα καὶ εὐσηψίαν· δι' ὃ καὶ οἱ περὶ Μακεδονίαν καὶ Θετταλίαν ὅταν ἀνθῶσιν ἀνατρέπουσι τὰς ἀρούρας.

[2] Τῶν δὲ ὁμοιοπύρων καὶ ὁμοιοκρίθων, οἷον ζειᾶς τίφης ὀλύρας βρόμου αἰγίλωπος, ἰσχυρότατον καὶ μάλιστα καρπιζόμενον ἢ ζειᾶ· καὶ γὰρ πολύρριζον καὶ βαθύρριζον καὶ πολυκάλαμον· ὁ δὲ καρπὸς κουφότατος καὶ προσφιλεῖς πᾶσι τοῖς ζώοις. τῶν δὲ ἄλλων ὁ βρόμος· πολύρριζος γὰρ καὶ οὗτος καὶ πολυκάλαμος. ἢ δὲ ὀλύρα μαλακώτερον καὶ ἀσθενέστερον τούτων. ἢ δὲ τίφη πάντων κουφότατον· καὶ γὰρ καὶ μονοκάλαμον <καὶ λεπτοκάλαμον,>

δι' ὃ καὶ χώραν ζητεῖ λεπτήν, οὐχ ὥσπερ ἡ ζειὰ πείραν καὶ ἀγαθήν. ἔστι δὲ δύο ταῦτα καὶ ὁμοιότατα τοῖς πυροῖς ἢ τε <ζειὰ καὶ ἡ τίφη,> ὃ δ' αἰγίλωψ καὶ ὁ βρόμος ὥσπερ ἄγρι' ἄττα καὶ ἀνήμερα.

[3] Ἐπικαρπίζεται δὲ σφόδρα καὶ ὁ αἰγίλωψ τὴν γῆν, καὶ ἐστὶ πολὺρριζον καὶ πολυκάλαμον· ἡ δὲ αἶρα παντελῶς ἀπηγριωμένον. τῶν δὲ ἐν τοῖς θερινοῖς ἀρότοις τὸ σήσαμον δοκεῖ χαλεπώτατον εἶναι τῇ γῇ καὶ μάλιστα καρπίζεσθαι· καίτοι πολυκαλαμώτερον καὶ παχυκαλαμώτερον καὶ πολυρριζότερον κέγχρος. διαφέρει δὲ τὰ τε πρὸς τὴν γῆν κοῦφα καὶ τὰ πρὸς τὴν ἡμετέραν τροφήν. ἔνια γὰρ ἐναντίως, ὥσπερ τὰ χεδροπὰ καὶ οἱ κέγχροι· καὶ τὰ πρὸς ἡμᾶς δέ, ὥσπερ ἐλέγχθῃ, καὶ τᾶλλα ζῶα. καὶ περὶ μὲν τούτων ἄλλῃς.

[10.1] Νοσήματα δὲ τῶν σπερμάτων τὰ μὲν κοινὰ πάντων ἐστίν, οἷον ἡ ἐρυσίβη, τὰ δ' ἰδιά τινων, οἷον ὁ σφακελισμὸς τοῦ ἐρεβίνθου, καὶ τὸ ὑπὸ καμπῶν κατεσθίεσθαι καὶ ὑπὸ ψυλλῶν, τινὰ δὲ καὶ ὑπ' ἄλλων θηριδίων. ἔνια δὲ καὶ ψωριᾷ καὶ ἀλμᾷ, καθάπερ καὶ τὸ κύμινον. τὰ δ' ἐπιγινόμενα ζῶα μὴ ἐξ αὐτῶν ἀλλ' ἐκ τῶν ἐξῶθεν οὐχ ὁμοίως βλάπτει. ἐπιγίνεται γὰρ ἡ μὲν καθαρίς ἐν τοῖς πυροῖς, τὸ δὲ φαλάγγιον ἐν ὀρόβοις, ἄλλα δ' ἐν ἄλλοις.

[2] Ἐρυσιβᾶ δ' ὥς ἀπλῶς εἰπεῖν τὰ σιτώδη μᾶλλον τῶν ὀσπρίων· αὐτῶν δὲ τούτων κριθὴ μᾶλλον ἢ πυρός· καὶ τῶν κριθῶν ἕτεραι ἐτέρων, μάλιστα δ' ὥς εἰπεῖν ἡ Ἀχιλλήϊς. διαφέρει δὲ καὶ ἡ τῶν χωρίων θέσις καὶ ἡ φύσις οὐ μικρόν· τὰ γὰρ προσήνεμα καὶ μετέωρα οὐκ ἐρυσιβᾶ ἢ ἥττον, ἀλλὰ τὰ ἔγκοιλα καὶ ἄπνοα· γίνεται δὲ ἡ ἐρυσίβη [3] πανσελήνοις μάλιστα. ἀπόλλυται δὲ καὶ ὑπὸ τῶν πνευμάτων καὶ πυρός καὶ κριθῇ, ὅταν ἢ ἀνθοῦντα ληφθῇ ἢ ἄρτι ἀπηνθηκότα καὶ ἀσθενῇ· μᾶλλον δὲ κριθῇ, πολλάκις δ' ἤδη ἐν τῷ ἀδρύνεσθαι οὔσα, ἐὰν μεγάλα καὶ πλείω χρόνον ἐπιγένηται· ξηραίνει γὰρ καὶ ἀφασαίνει, ὃ καλοῦσιν τινες ἐξανεμοῦσθαι. διαπόλλυσι δὲ καὶ ἥλιος ὁ ἐκνέφελος ἄμφω καὶ μᾶλλον πυρὸν ἢ κριθήν, ὥστε μὴδ' ἐπίδηλον εἶναι τὸν στάχυν τῇ ὄψει ὄντα κενόν.

[4] Τὸν δὲ πυρὸν ἀπολλύουσι καὶ οἱ σκώληκες οἱ μὲν εὐθὺς κατεσθίοντες φνόμενοι τὰς ρίζας, οἱ δὲ ὅταν αὐχμῶντες ἀποχυθῇναι μὴ δύνωνται· τότε γὰρ ἐγγινόμενος ὁ σκώληξ ἐσθίει τὸν ἀποπνηιζόμενον κάλαμον· ἐσθίει δὲ ἄχρι τοῦ στάχους, εἴτ' ἐξαναλώσας ἀπόλλυται· καὶ ἐὰν μὲν ὅλον ἐκφάγῃ τελέως αὐτὸς ὁ πυρός, ἐὰν δὲ ἐπὶ θάτερον τοῦ καλάμου καὶ ἐκβιάσῃται τὴν ἀπόχυσιν, τοῦτο μὲν αὖτον τοῦ στάχους θάτερον δὲ ὑγιές. γίνεται δὲ οὐ πανταχοῦ τὸ περὶ τοὺς πυρούς, οἷον ἐν Θετταλία, ἀλλὰ κατὰ χώρας τινάς, ὥσπερ ἐν τῇ Λιβύῃ καὶ τῇς Εὐβοίας ἐν τῷ Ληλάντῳ.

[5] Σκώληκες δὲ γίνονται καὶ ἐν τοῖς ὥχροις καὶ τοῖς λαθύροις καὶ τοῖς πισοῖς, ὅταν ὑγρανθῶσι καὶ θερμημερίαί γένωνται, καθάπερ καὶ ἐν τοῖς ἐρεβίνθοις αἱ κάμπαι. πάντα δὲ ἐξαναλώσαντα τὰς τροφὰς ἀπόλλυται καὶ ἐν τοῖς χλωροῖς καὶ ἐν τοῖς ξηροῖς καρποῖς, οἷον οἱ τε ἵπες καὶ οἱ ἐν τοῖς κύμοις ἐγγινόμενοι καὶ ἐν τοῖς ἄλλοις, ὥσπερ καὶ ἐν τοῖς δένδρεσι καὶ ἐν τοῖς ξύλοις ἐλέχθη, πλὴν τῶν κεραστῶν καλουμένων. πρὸς ἅπαντα δὴ ταῦτα μεγάλα διαφέρουσιν αἱ χῶραι οὐκ ἀλόγως· ὁ γὰρ ἀήρ εὐθὺς διάφορος τῷ θερμῷ ἢ ψυχρῷ εἶναι ἢ ὑγρῷ ἢ ξηρῷ· οὗτος δ' ἦν ὁ γονεύων· δι' ὃ καὶ ἐν οἷς εἰώθασιν γίνεσθαι οὐκ αἰετὶ γίνονται.

[11.1] Τῶν δὲ σπερμάτων οὐχ ἡ αὐτὴ δύναμις ἐστὶν εἰς τε τὴν βλάστησιν καὶ εἰς θησαυρισμόν. ἓνα μὲν γὰρ βλαστάνει καὶ τελειοῦται τάχιστα καὶ θησαυρίζεται κράτιστα, καθάπερ ἔλυμος καὶ κέγχρος· ἓνα δὲ βλαστάνει μὲν εὖ ταχέως δὲ σήπεται, καθάπερ ὁ κύαμος καὶ μᾶλλον ὁ τεράμων· ταχὺ δ' ἡ ἀφάκη καὶ ὁ δόλιχος· κριθὴ δὲ πυροῦ <θαττον>· θαττον δὲ καὶ ὁ κονιορτώδης σῖτος καὶ ὁ ἐν οἰκήμασι κονιατοῖς ἢ ἀκονιάτοις.

[2] Γίνεται δὴ φθειρομένοις σπέρμασι ἴδια ζῶα, καθάπερ ἐλέχθη, πλὴν ἐρεβίνθου· μόνος γὰρ οὗτος οὐ ζωογονεῖ. καὶ σηπομένοις μὲν πᾶσι σκώληξ κοπτομένοις δὲ καθ' ἕκαστον ἴδιον. πάντων δὲ μάλιστα διαμένουσιν ἐρέβινθος καὶ ὄροβος, τούτων δ' ἔτι μᾶλλον ὁ θέρμος· ἀλλ' ἔοικέ γ' οὗτος ὥσπερ ἀγρίῳ.

[3] Διαφέρει δὲ ὡς ἔοικε χώρα χώρας καὶ ἀήρ ἀέρος εἰς τὸ κόπτεσθαι καὶ μὴ τὰ σπέρματα· ἐν Ἀπολλωνίᾳ γοῦν τῇ περὶ τὸν Ἴονιον οὐκ ἐσθίεσθαι φασὶν ὅλως κύαμον, δι' ὃ καὶ εἰς θησαυρισμόν ἀποτίθεσθαι· διαμένει δὲ καὶ περὶ Κυζικὸν ἐπὶ πλείῳ. μέγα δὲ πρὸς διαμονὴν καὶ τὸ ξηρὰ θερίζειν· ἐλάττων γὰρ ἢ ὑγρότης· θερίζουσι δ' ἐγγυλότερα τὰ μὲν χεδροπὰ πρὸς τὸ μᾶλλον καὶ ῥᾶον συλλέξαι, ταχὺ γὰρ καταρρεῖ καὶ ἀνανθέντα θρύπτεται, τοὺς δὲ πυροὺς καὶ γένος τι κριθῶν διὰ τὸ βελτίους εἰς τὰ ἄλφιστα γίνεσθαι μὴ ἀπεξηραμμένας.

[4] Δι' ὃ καὶ εἰς θώμους συντιθέασιν καὶ πυροὺς καὶ κριθάς, καὶ δοκοῦσιν ἀδρύνεσθαι ἐν θώμῳ μᾶλλον ἢ λιποσαρκεῖν. οὐκ ἐσθίεται δὲ σῖτος, ὅταν ὑσθεῖς θερισθῇ· ἀθήριστος δὲ μάλιστα διαμένει ὁ πυρός, ἔτι δὲ μᾶλλον ὁ θέρμος· οὐδὲ γὰρ θερίζουσι τοῦτον πρότερον ἢ ὕδωρ γενέσθαι, διὰ τὸ ἐκπηδᾶν θεριζόμενον καὶ ἀπόλλυσθαι τὸ σπέρμα.

[5] Πρὸς ἔκφυσιν δὲ καὶ τὴν ὅλην σπορὰν ἄριστα δοκεῖ τὰ ἐνάενα· τὰ δὲ δίενα χεῖρω καὶ τὰ τρίενα, τὰ δ' ὑπερτείνοντα σχεδὸν ἄγονα, πρὸς δὲ τὴν σίτησιν ἀρκοῦντα. βίος γάρ ἐστιν ἐκάστοις ὠρισμένος εἰς γονήν. καίτοι καὶ

ταύταις παραλλάττει ταῖς δυνάμεσι διὰ τοὺς τόπους ἐν οἷς ἂν θησαυρίζωνται. τῆς γοῦν Καππαδοκίας ἐν χωρίῳ τινὶ τῷ καλουμένῳ Πέτρα καὶ τετταράκοντα ἔτη διαμένειν φασὶ γόνιμα καὶ χρήσιμα πρὸς σπóρον, εἰς δὲ τὴν σίτησιν ἐξήκοντα ἢ ἑβδομήκοντα· τὸ γὰρ ὅλον οὐ κόπτεσθαι· τὰ δὲ ἱμάτια καὶ τὴν ἄλλην ^[6] γάζαν κόπτεσθαι. τὸ γὰρ χώριον ἄλλως τε ὑψηλὸν εἶναι καὶ εὐπνουν καὶ ἑναυρον αἰεὶ καὶ ἀπ' ἀνατολῆς ἔχουσι καὶ δýσεως καὶ μεσημβρίας. φασὶ δὲ καὶ ἐν Μηδεΐᾳ καὶ ταῖς ἄλλαις ταῖς ὑψηλαῖς χώραις διαμένειν θησαυριζόμενα πολλὸν χρόνον. ἐρέβινθον δὲ δὴ καὶ θερμόν καὶ ὄροβον καὶ κέγγρον καὶ τὰ τοιαῦτα δηλὸν ὅτι πολλῶ πλείω τούτων, ὥσπερ καὶ ἐν τοῖς περὶ τὴν Ἑλλάδα τόποις. ἀλλὰ ταῦτα μὲν, ὥσπερ εἴρηται, τῶν τόπων ἴδια.

[7] Δοκεῖ δὲ καὶ γῆ τις εἶναι παρά τισιν ἢ διαπαττομένη συντηρεῖ τὸν πυρόν, ὥσπερ ἢ τε ἐν Ὀλύνθῳ καὶ ἐν Κηρίνθῳ τῆς Εὐβοίας· ποιεῖ δὲ χεῖρω μὲν εἰς τὴν σίτησιν ἀδρότερον δὲ τῇ προσόψει· παραπάττουσι δὲ χοίνικα εἰς τὸν μέδιμνον.

Πυρωθέντα πάντα τὰ σπέρματα ἀπόλλυται καὶ ἀβλαστῇ γίνεται· καίτοι περὶ γε Βαβυλῶνά φασι τὰς κριθὰς καὶ τοὺς πυροὺς ἐπὶ τῆς ἄλλῳ πηδᾶν, ὥσπερ τὰ φρυγόμενα· ἀλλὰ δηλὸν ὅτι διαφορὰ τίς ἐστι τῆς θερμότητος, ἢ ἀπλῶς πως θερμασία γίνεται [καὶ] ἢ πῆδησις. καὶ τὰ μὲν τοιαῦτα σχεδὸν ὥσπερ εἰ κοινὰ δόξειεν ἂν εἶναι πάντων ἢ τῶν πλείστων.

[8] Ἔνια δὲ ἔχει τινὰ ιδιότητα καὶ τῶν δοκούντων ὥσπερ ἀγρίων εἶναι καὶ κατὰ τὴν γένεσιν καὶ τὴν ἔκφυσιν, ὥσπερ ὁ θερμός καὶ ὁ αἰγίλωψ· ὁ μὲν γὰρ θερμός καίπερ ἰσχυρότατος ὢν ὅμως, ἐὰν μὴ εὐθύς ἀπὸ τῆς ἄλλῳ καταβληθῇ, κακοφυῆς γίνεται, καθάπερ ἐλέχθη, καὶ τὸ ὅλον δὲ οὐκ ἐθέλει κρύπτεσθαι τῇ γῇ, δι' ὃ καὶ οὐχ ὑπαροῦντες σπεύρουσι· πολλάκις δὲ καὶ εἰς ὕλην ἢ βοτάνην τινὰ ἐσση, διωσάμενος ταύτην συνάπτει τὴν ρίζαν τῇ γῇ καὶ βλαστάνει. χώραν δὲ ὕφαιμον ζητεῖ καὶ φαύλην μᾶλλον, τὸ δὲ ὅλον οὐκ ἐθέλει φύεσθαι ἐν διειργασμένῃ.

[9] Ὁ δὲ αἰγίλωψ ἀνάπαλιν· ἐν γὰρ τῇ γεωργουμένη κάλλιον· καὶ ἐνιαχοῦ δὲ πρότερον ἀβλαστῆς ὢν ἐὰν γεωργηθῇ βλαστάνει καὶ γίνεται πολὺς, καὶ ὅλως δὲ φιλεῖ χώραν ἀγαθὴν. ἴδιον δὲ αὐτοῦ λέγεται πρὸς τὰ ἄλλα τὰ σιτώδη σπέρματα καὶ ἢ παρ' ἐνιαυτὸν βλάστησις ἑκατέρου τῶν σπερμάτων. δι' ὃ καὶ οἱ βουλόμενοι τελέως φθεῖραι, δύσφθοarton γὰρ δὴ φύσει τυγχάνει, τὰς ἀρούρας ἀνιάσιν ἀσπόρους ἐπὶ δύο ἔτη, καὶ ὅταν ἀναβλαστήσῃ τὰ πρόβατα ἐπαφιάσι πολλάκις, ἕως ἂν ἐκνεμηθῶσι, καὶ αὕτη γίνεται φθορὰ παντελής· ἅμα δὲ τοῦτο μαρτυρεῖ καὶ τὴν παρὰ μέρος βλάστησιν.

Liber IX

Ἡ ὑγρότης οἰκεία τῶν φυτῶν, ἣν δὴ καλοῦσί τινες ὁπὸν ὀνόματι κοινῶ προσαγορεύοντες· δύναμιν δὲ ἔχει δηλονότι τὴν καθ' αὐτὴν ἐκάστη. χυμὸς δὲ ταῖς μὲν μᾶλλον ταῖς δ' ἤττον ἀκολουθεῖ, ταῖς δ' ὅλως οὐκ ἂν δόξειεν, οὕτως ἀσθενὴς καὶ ὑδαρὴς τίς ἐστι. πλείστη μὲν οὖν ὑπάρχει πᾶσι κατὰ τὴν βλάστησιν, ἰσχυροτάτη δὲ καὶ μάλιστα ἐκφαίνουσα τὴν ἑαυτῆς φύσιν ὅταν ἤδη παύσῃται καὶ βλαστάνοντα καὶ καρπογονοῦντα. συμβαίνει δὲ τισι τῶν φυτῶν καὶ χροᾶς ἰδίας ἔχειν· τοῖς μὲν λευκὰς οἶον τοῖς ὀπώδεσι, τοῖς δ' αἱματώδεσι οἶον τῷ κενταυρίῳ καὶ τῇ ἀτρακτυλίδι καλουμένη ἀκάνθη, τοῖς δὲ χλωρόν, τοῖς δ' ἐν ἄλλῃ χροᾷ. ἐνδηλα δὲ μᾶλλον ταῦτα ἐν τοῖς ἐπετείοις καὶ τοῖς ἐπετειοκαύλοις ἢ τοῖς δένδροις.

[2] Ἡ δ' ὑγρότης τῶν μὲν πάχος ἔχει μόνον, ὥσπερ τῶν ὀπωδῶν· τῶν δὲ καὶ δακρυώδης γίνεται, καθάπερ ἐλάτης πεύκης τερεβίνθου πίτυος ἀμυγδαλῆς κεράσου προύμνης ἀρκεύθου κέδρου τῆς ἀκάνθης τῆς Αἰγυπτίας πετελεᾶς, καὶ γὰρ αὕτη φέρει κόμμι πλὴν οὐκ ἐκ τοῦ φλοιοῦ ἄλλ' ἐν τῷ κωρύκῳ, ἔτι δὲ ἀφ' ὧν ὁ λίβανος καὶ ἡ σμύρνα, δάκρυα γὰρ καὶ ταῦτα, καὶ τὸ βάλσαμον καὶ <ἡ> χαλβάνη καὶ εἴ τι τοιοῦτον ἕτερον, οἷόν φασι τὴν ἄκανθαν τὴν Ἰνδικήν, ἀφ' ἧς γίνεται τι ὅμοιον τῇ σμύρνῃ· συνίσταται δὲ καὶ ἐπὶ τῆς σχίνου καὶ ἐπὶ τῆς ἀκάνθης τῆς ἰζίνης καλουμένης, ἐξ ὧν ἡ μαστίχη.

[3] Ἄπαντα δὲ ταῦτα εὖοσμα καὶ σχεδὸν ὅσα πιότητά τινα ἔχει καὶ λίπος· ὅσα δ' ἀλιπῇ ταῦτα δ' ἄοσμα, καθάπερ τὸ κόμμι καὶ τὸ τῆς ἀμυγδαλῆς. ἔχει δὲ δάκρυον καὶ ἡ ἰξία ἡ ἐν Κρήτῃ καὶ ἡ τραγάκανθα καλουμένη· ταύτην δὲ πρότερον ᾤοντο μόνον ἐν Κρήτῃ φύεσθαι, νῦν δὲ φανερὰ καὶ ἐν Ἀχαΐδι τῆς Πελοποννήσου καὶ ἄλλοι καὶ τῆς Ἀσίας περὶ τὴν Μήδειαν. καὶ τούτων μὲν πάντων ἐν τε τοῖς καυλοῖς καὶ τοῖς στελέχεσι καὶ τοῖς ἀκρεμόσι τὸ δάκρυον· ἐνίων δ' ἐν ταῖς ῥίζαις, ὥσπερ τοῦ ἵπποσελίνου καὶ τῆς σκαμμωνίας καὶ ἄλλων πολλῶν φαρμακῶδων. τῶν δὲ καὶ ἐν τῷ καυλῷ καὶ ἐν τῇ ῥίζῃ· καὶ γὰρ τὸν καυλὸν ὀπίζουσιν ἐνίων καὶ τὰς ῥίζας, ὥσπερ καὶ τοῦ σιλφίου.

[4] Τὸ μὲν οὖν τοῦ ἵπποσελίνου παρόμοιον τῇ σμύρνῃ· καὶ τινες ἀκούσαντες ὡς ἐντεῦθεν ἡ σμύρνα ἡγούνται βλαστάνειν ἐξ αὐτῆς ἵπποσελίνον· φυτεύεται γὰρ, ὥσπερ ἐλέχθη, καὶ ἀπὸ δακρύου τὸ ἵπποσελίνον, καθάπερ ἡ κρινωνία καὶ ἄλλα. τὸ δὲ τοῦ σιλφίου δριμύ, καθάπερ αὐτὸ τὸ σίλφιον· ὁ γὰρ ὁπὸς καλούμενος τοῦ σιλφίου δάκρυόν ἐστιν. ἡ δὲ σκαμμωνία καὶ εἴ τι ἄλλο τοιοῦτον, ὥσπερ ἐλέχθη, φαρμακώδεις ἔχουσι τὰς δυνάμεις.

[5] Πάντων δὲ τῶν εἰρημένων τὰ μὲν αὐτομάτως συνίσταται, τὰ δ' ἀπ' ἐντομῆς, τὰ δ' ἀμοτέρωθεν· τέμνουσι δὲ δῆλον ὅτι τὰ χρήσιμα καὶ τὰ μᾶλλον ἐπιζητούμενα. τοῦ δ' ἀπὸ τῆς ἀμυγδαλῆς οὐδεμία χρεία δακρύου, δι' ὃ οὐκ ἀφελκοῦσι. πλὴν ἐκεῖνό γε φανερόν ὅτι ὢν αὐτόματος ἡ πῆξις [6] τούτων πλείων ἢ ἐπιρροή τῆς ὑγρότητος. οὐ τὴν αὐτὴν δ' ὥραν ἀπάντων αἱ ἐντομαὶ καὶ ἡ πῆξις, ἀλλὰ τὸ μὲν τῆς ἀμπέλου μάλιστα συνίστασθαι φασιν ἐὰν μικρὸν πρὸ τῆς βλαστήσεως τηθηῇ, τοῦ δὲ μετοπώρου καὶ ἀρχομένου τοῦ χειμῶνος ἦττον· καίτοι πρὸς γε καρποτοκίαν αἱ ὠραιόταται ταῖς γε πλείσταις αὐται. τῆς δὲ τερμίνθου καὶ τῆς πεύκης καὶ εἰ ἔκ τινων ἄλλων ῥητίνη γίνεται μετὰ τὴν βλάστησιν· τὸ δ' ὅλον οὐκ ἐπέτειος ἡ τούτων, ἀλλ' εἰς πλείω χρόνον ἢ ἐντομή. τὸν δὲ λιβανωτὸν καὶ τὴν σμύρναν ὑπὸ Κύνα φασὶ καὶ ταῖς θερμοτάταις ἡμέραις ἐντέμνειν· ὡσαύτως δὲ καὶ τὸ ἐν Συρίᾳ βάλαμον.

[7] Ἀκριβεστέρα δὲ καὶ ἐλάττων ἢ καὶ τούτων ἐντομή· καὶ γὰρ ἡ συρροή τῆς ὑγρότητος ἐλάττων· ὢν δὲ καὶ ὁ καυλὸς ἐντέμνεται καὶ ἡ ῥίζα, τούτων ὁ καυλὸς πρότερον, ὥσπερ καὶ τοῦ σιλφίου, καὶ καλοῦσι δὲ τῶν ὁπῶν τούτων τὸν μὲν καυλίαν τὸν δὲ ῥίζιαν· καὶ ἐστὶ βελτίων ὁ ῥίζιας· καθαρὸς γὰρ καὶ διαφανὴς καὶ ξηρότερος. ὁ δὲ καυλίας ὑγρότερος· καὶ διὰ τοῦτο ἄλευρον αὐτῷ περιπάττουσι πρὸς τὴν πῆξιν. τὴν ὥραν τῆς ἐντομῆς ἴσασιν οἱ Λίβυες· οὗτοι γὰρ οἱ σίλφιον λέγοντες. ὡσαύτως δὲ καὶ οἱ ῥιζοτόμοι καὶ οἱ τοὺς φαρμακώδεις ὁποὺς συλλέγοντες· καὶ γὰρ οὗτοι τοὺς καυλοὺς ὀπίζουσι πρότερον. ἀπλῶς δὲ πάντες καὶ οἱ τὰς ῥίζας καὶ οἱ τοὺς ὁποὺς συλλέγοντες τὴν οἰκείαν ὥραν ἐκάστων τηροῦσι. καὶ τοῦτο μὲν δὴ κοινόν.

[2.1] Ἡ δὲ ῥητίνη γίνεται τόνδε τὸν τρόπον· ἐν μὲν τῇ πεύκῃ ὅταν ἀφελκωθείσης ἡ δᾶς ἐξαيرهθῇ, συρρεῖ γὰρ εἰς τὸ ἔλκωμα τοῦτο πλείων ἢ ὑγρότης, ἐν δὲ τῇ ἐλάτῃ καὶ τῇ πίτυϊ ὅταν γευσάμενοι τῶν ξύλων ἀφελκώσωσιν· οὐ γὰρ πᾶς ἀφορισμὸς ὁμοίως· ἀφελκοῦσι γὰρ καὶ τὰς τερμίνθους ἐν ἀμφοῖν καὶ ἐν τῷ στελέχει καὶ ἐν τοῖς ἀκρεμόσιν· αἰεὶ δὲ πλείων καὶ βελτίων ἢ εἰς τὸ στέλεχος συρρέουσα τῆς εἰς τοὺς ἀκρεμόνας.

[2] Διαφέρουσι δὲ καὶ κατὰ τὰ δένδρα. βελτίστη μὲν γὰρ ἡ τερμινθίνη· καὶ γὰρ συνεστηκυῖα καὶ εὐωδεστάτη καὶ κουφοτάτη τῇ ὁσμῇ ἀλλ' ὀλίγη. δευτέρα δὲ ἡ ἐλατίνη καὶ πιτυΐνη, κουφότεραι γὰρ τῆς πευκίνης. πλείστη δὲ ἡ πευκίνη καὶ βαρυτάτη καὶ πιττωδεστάτη διὰ τὸ μάλιστα ἔνδαδον εἶναι τὴν πεύκην. ἄγεται δὲ ἐν ἀσκοῖς ὑγρά, κᾶπεται οὕτω συνίσταται. καίτοι φασὶ καὶ τὴν τερμινθὸν πιττοκαυτεῖσθαι περὶ Συρίαν· ἐστὶ γὰρ ὁρος, καθάπερ ἐν τοῖς ἔμπροσθεν εἵπομεν, μέγα τερμίνθων μεστὸν ἅπαν μεγάλων.

[3] Ἔνιοι δέ φασι καὶ τὴν πίτυν καὶ τὴν κέδρον δὲ τὴν Φοινικικὴν· ἀλλὰ ταῦτα μὲν ὡς ἐνδεχόμενα ληπτέον διὰ τὸ σπάνιον· ἐπεὶ οἱ γε περὶ Μακεδονίαν οὐδὲ τὴν πεύκην πιττοκαυτοῦσιν ἀλλ' ἢ τὴν ἄρρενα· καλοῦσι γὰρ ἄρρενα τὴν μὴ καρποφόρον. τῆς δὲ θηλείας ἐάν τινα τῶν ριζῶν λάβωσιν· ἅπαντα γὰρ ἔνδαδος πεύκη ταῖς ρίζαις. καλλίστη δὲ πίττα γίνεται καὶ καθαρωτάτη ἢ ἐκ τῶν σφόδρα προσείλων καὶ προσβόρρων, ἐκ δὲ τῶν παλισκίων βλοσυρωτέρα καὶ βορβορώδης· ἐν γὰρ τοῖς σφόδρα παλισκίοις οὐδὲ φύεται πεύκη τὸ παράπαν.

[4] Ἔστι δὲ καὶ ἀφορία τις καὶ εὐφορία καὶ πλήθους καὶ καλλονῆς· ὅταν μὲν γὰρ χειμῶν μέτριος γίνηται, πολλὴ γίνεται καὶ καλὴ καὶ τῷ χρώματι λευκότερα, ὅταν δὲ ἰσχυρός, ὀλίγη καὶ μοχθηροτέρα. καὶ ταῦτά γε ἐστὶ τὰ ὀρίζοντα πλῆθος καὶ καλλονὴν πίττης, οὐχ ἢ πολυκαρπία τῶν πευκῶν.

[5] Οἱ δὲ περὶ τὴν Ἰδὴν φασί, διαιροῦντες τὰς πεύκας καὶ τὴν μὲν καλοῦντες Ἰδαίαν τὴν δὲ παραλίαν, τὴν ἐκ τῆς Ἰδαίας πλείω καὶ μελαντέραν γίνεσθαι καὶ γλυκυτέραν καὶ τὸ ὅλον εὐωδεστέραν ὠμὴν, ἐψηθεῖσαν δὲ ἐλάττω ἐκβαίνειν· πλείω γὰρ ἔχειν τὸν ὀρρόν, δι' ὃ καὶ λεπτοτέραν εἶναι. τὴν δὲ τῆς παραλίας ξανθοτέραν καὶ παχυτέραν ὠμὴν, ὥστε καὶ τὴν ἄφεψιν ἐλάττω γίνεσθαι, δαδωδεστέραν δὲ τὴν Ἰδαίαν. ὡς δὲ ἀπλῶς εἰπεῖν ἐκ τῆς ἴσης δαδὸς πλείω καὶ ὑδαρεστέραν ἐν ταῖς ἐπομβρίαῖς γίνεσθαι ἢ ἐν τοῖς αὐχμοῖς, καὶ ἐκ τῶν χειμερινῶν καὶ παλισκίων τόπων ἢ ἐκ τῶν εὐείλων καὶ εὐδιεινῶν. ταῦτα μὲν οὖν οὕτως ἐκάτεροι λέγουσιν.

[6] Ἀναπληροῦσθαι δὲ συμβαίνει τὰ κοιλώματα πρὸς τὸ πάλιν ἐξαιρεῖν τῶν μὲν ἀγαθῶν πευκῶν ἐνιαυτῷ, τῶν δὲ μετριωτέρων ἐν δυσὶν ἔτεσι, τῶν δὲ μοχθηρῶν ἐν τρισίν. ἢ δὲ ἀναπλήρωσις οὐ τοῦ ξύλου καὶ τῆς συμφύσεως ἀλλὰ τῆς πίττης ἐστίν· ἐπεὶ τὸ ξύλον ἀδύνατον συμφῶναι καὶ ἐν γενέσθαι πάλιν, ἀλλ' ἢ ἐργασία διὰ τοσούτου χρόνου γίνεται τῆς πίττης· ἀναγκαῖον δὲ δῆλον ὅτι καὶ τῷ ξύλῳ γίνεσθαί τινα πρόσφυσιν, εἴπερ ἐξαιρουμένης τῆς δαδὸς καὶ καιομένης τῆς πίττης ἢ ἐκροή. τοῦτο μὲν οὖν οὕτω ληπτέον.

[7] Οἱ δὲ περὶ τὴν Ἰδὴν φασίν, ὅταν λεπίσωσι τὸ στέλεχος, - λεπίζουσι δὲ τὸ πρὸς ἥλιον μέρος ἐπὶ δύο ἢ τρεῖς πήχεις ἀπὸ τῆς γῆς - ἐνταῦθα τῆς ἐπιρροῆς γινομένης ἐνδαδοῦσθαι ἐνιαυτῷ μάλιστα, τοῦτο δ' ὅταν ἐκπελεκήσωσιν ἐν ἐτέρῳ πάλιν ἐνδαδοῦσθαι καὶ τὸ τρίτον ὡσαύτως, μετὰ δὲ ταῦτα διὰ τὴν ὑποτομὴν ἐκπίπτειν τὸ δένδρον ὑπὸ τῶν πνευμάτων σαπέν· τότε δ' ἐξαιρεῖν αὐτοῦ τὴν καρδίαν, τοῦτο γὰρ μάλιστα δαδῶδες, ἐξαιρεῖν δὲ ἐκ τῶν ριζῶν· καὶ γὰρ ταύτας, ὥσπερ εἵπομεν, ἐνδάδους πασῶν.

[8] Εἰκὸς δὲ δῆλον ὅτι τὰς μὲν ἀγαθὰς, ὥσπερ ἐλέγχθη, συνεχῶς τοῦτο δρᾶν τὰς δὲ χείρονας διὰ πλείονος χρόνου· καὶ ταμιευομένων μὲν πλείω χρόνον ἀντέχειν, ἐὰν δὲ πᾶσαν ἐξαιρῶσιν ἐλάττω· δύναται δ' ὥς ἔοικε τρεῖς μάλιστα τοιαύτας ἐξαίρεσεις ὑπομένειν. οὐχ ἅμα δὲ καρποφοροῦσιν αἱ πεῦκαι καὶ δαδοφοροῦσι· καρποφοροῦσι μὲν γὰρ εὐθὺς νέαι, δαδοφοροῦσι δὲ ὕστερον πολλῷ πρεσβύτεραι γινόμεναι.

[3.1] Τὴν δὲ πίτταν καίουσι τόνδε τὸν τρόπον· ὅταν κατασκευάσωσιν ὁμαλὴν τόπον ὥσπερ ἄλωποιήσαντες ἔχουσιν εἰς τὸ μέσον συρροὴν καὶ ταύτην ἐδαφίσωσι, κατασχίσαντες τοὺς κορμούς συντιθέασι παραπλησίαν σύνθεσιν τῆς τῶν ἀνθρακευόντων, πλὴν οὐκ ἔμβοθρον· ἀλλὰ τὰς σχίζας ὀρθὰς πρὸς ἀλλήλας, ὥστε λαμβάνειν ὕψος αἰεὶ κατὰ πλῆθος· γίνεσθαι δὲ φασιν, ὅταν ἡ σύνθεσις ἧ κύκλῳ μὲν ὀγδοήκοντα καὶ ἑκατὸν πηχέων εἰς ὕψος δὲ ἐξήκοντα πλεῖστον ἢ πεντήκοντα ἢ ἑκατὸν ἀμφοτέροις, ἐάνπερ ἡ δᾶς τυγχάνῃ [2] πίειρα. συνθέντες οὖν αὐτὴν οὕτως καὶ κατασκεπάσαντες ὕλη γῆν ἐπιβαλόντες κατακρύπτουσιν ὅπως μηδαμῶς διαλάμψη τὸ πῦρ, ἀπόλλυται γὰρ ἡ πίττα τούτου συμβάντος. ὑφάπτουσι δὲ κατὰ τὴν ὑπολειπομένην δίοδον· εἴτα δὲ καὶ ταῦτα ἐπιφράξαντες τῇ ὕλῃ καὶ ἐπιχώσαντες τηροῦσιν ἀναβαίνοντες κατὰ κλίμακος, ἧ ἂν ὀρῶσι τὸν καπνὸν ὠθούμενον, καὶ ἐπιβάλλουσιν αἰεὶ τῆς γῆς ὅπως μὴδ' ἀναλάμψη. κατεσκευάσται δὲ ὀχετὸς τῇ πίττῃ διὰ τῆς συνθέσεως τῆς ἀπορροῆς εἰς βόθυνον ὅσον ἀπέχοντα πεντεκαίδεκα πῆχεις· ἡ δ' ἀπορρέουσα τῆς πίττης [3] ψυχρὰ γίνεται κατὰ τὴν ἀφὴν. καίεται δὲ μάλιστα δύο ἡμέρας καὶ νύκτας· τῇ γὰρ ὕστεραία πρὸ ἡλίου δύναντος ἐκκεκαυμένη γίνεται καὶ ἐνδεδωκεν ἡ πυρά· τοῦτο γὰρ συμβαίνει μηκέτι ῥεούσης. τοῦτον δὲ τὸν χρόνον ἅπαντα τηροῦσιν ἀγρυπνοῦντες, ὅπως μὴ διαλάμψη, καὶ θύουσι δὲ καὶ ἐορτάζουσιν εὐχόμενοι πολλήν τε καὶ καλὴν γίνεσθαι τὴν πίτταν· οἱ μὲν δὴ περὶ Μακεδονίαν καίουσι τὸν τρόπον τοῦτον.

[4] Ἐν δὲ τῇ Ἀσίᾳ φασὶ περὶ Συρίαν οὐκ ἐκπελεκῶντας τὴν δᾶδα ἀλλ' ἐπ' αὐτῷ τῷ δένδρῳ προσκαίειν φέροντας ὄργανόν τι περιπεποιημένον καὶ τούτῳ περιάπτοντας, εἴθ' ὅταν ἐκτῆξωσι ταύτην πάλιν ἐπ' ἄλλο καὶ ἄλλο μεταφέρειν· ὅρος δὲ ἐστὶν αὐτοῖς τις καὶ σημεῖα τοῦ παύεσθαι καὶ μάλιστα δῆλον ὅτι τὸ μηκέτι ρεῖν. πιττοκαυτοῦσι δέ, ὥσπερ καὶ πρότερον ἐλέγχθη, τὰς τερμίνθους· πεύκην γὰρ οὐ φέρουσιν οἱ τόποι. τὰ μὲν οὖν περὶ τὴν ῥητίνην καὶ τὴν πίτταν οὕτως ἔχει.

[4.1] Περὶ δὲ λιβανωτοῦ καὶ σμύρνης καὶ βαλσάμου καὶ εἴ τι τοιοῦτον ἕτερον ὅτι μὲν καὶ ἀπ' ἐντομῆς γίνεται καὶ αὐτομάτως εἴρηται. ποία δὲ τις ἡ

τῶν δένδρων φύσις καὶ εἴ τι περὶ τὴν γένεσιν ἢ τὴν συλλογὴν ἢ τῶν ἄλλων ἴδιον αὐτοῖς ὑπάρχει πειρατέον εἰπεῖν, ὡσαύτως δὲ καὶ περὶ τῶν λοιπῶν εὐόσμων· σχεδὸν γὰρ τὰ γε πλεῖστα ἀπὸ τῶν τόπων ἐστὶ τῶν τε πρὸς μεσημβρίαν καὶ ἀνατολήν.

[2] Γίνεται μὲν οὖν ὁ λίβανος καὶ ἡ σμύρνα καὶ ἡ κασία καὶ ἔτι τὸ κινάμωμον ἐν τῇ τῶν Ἀράβων Χερρονήσῳ περὶ τε Σαβὰ καὶ Ἀδραμύτα καὶ Κιτίβαινα καὶ Μαμάλι. φύεται δὲ τὰ τοῦ λιβανωτοῦ καὶ τῆς σμύρνης δένδρα τὰ μὲν ἐν τῷ ὄρει τὰ δ' ἐν ταῖς ἰδίαις γεωργίαις ὑπὸ τὴν ὑπώρειαν, δι' ὃ καὶ τὰ μὲν θεραπεύεται τὰ δ' οὐ· τὸ δ' ὅρος εἶναί φασιν ὑψηλὸν καὶ δασὺ καὶ νιφόμενον, ῥεῖν δ' ἐξ αὐτοῦ καὶ ποταμούς εἰς τὸ πέδιον. εἶναι δὲ τὸ μὲν τοῦ λιβανωτοῦ δένδρον οὐ μέγα, πεντάπηχυ δέ τι καὶ πολύκλαδον, φύλλον δ' ἔχειν ἐμφορὲς τῇ ἀπίῳ, πλὴν ἔλαττον πολὺ καὶ τῷ χρώματι ποῶδες σφόδρα, καθάπερ τὸ πῆγανον· λειόφλοιον δὲ πᾶν, ὥσπερ τὴν δάφνην.

[3] Τὴν δὲ σμύρναν ἔλαττον ἔτι τῷ μεγέθει καὶ θαμνωδέστερον δέ, τὸ δὲ στέλεχος ἔχειν σκληρὸν καὶ συνεστραμμένον ἐπὶ τῆς γῆς, παχύτερον δὲ ἢ κνημοπαχές· φλοιὸν δὲ ἔχειν λεῖον ὅμοιον τῇ ἀνδράχλῃ. ἕτεροι δὲ οἱ φάσκοντες τεθεωρηκέναι περὶ μὲν τοῦ μεγέθους σχεδὸν συμφωνοῦσιν· οὐδέτερον γὰρ εἶναι μέγα τῶν δένδρων, ἔλαττον δὲ τὸ τῆς σμύρνης καὶ ταπεινότερον· φύλλον δὲ ἔχειν τὸ τοῦ λιβανωτοῦ δαφνοειδὲς καὶ λειόφλοιον δ' εἶναι· τὸ δὲ τῆς σμύρνης ἀκανθῶδες καὶ οὐ λεῖον, φύλλον δὲ προσεμφορὲς ἔχειν τῇ πετελέα, πλὴν οὐλὸν ἐξ ἄκρου δὲ ἐπακανθίζον, ὥσπερ τὸ τῆς πρίνου.

[4] Ἐφασαν δὲ οὗτοι κατὰ τὸν παράπλουον ὃν ἐξ Ἡρώων ἐποιοῦντο κόλπου ζητεῖν ἐκβάντες ὕδωρ ἐν τῷ ὄρει καὶ οὕτω θεωρῆσαι τὰ δένδρα καὶ τὴν συλλογὴν. εἶναι δ' ἀμφοτέρων ἐντετμημένα καὶ τὰ στελέχη καὶ τοὺς κλάδους, ἀλλὰ τὰ μὲν ὥσπερ ἀξίνη δοκεῖν τετμηθῆναι τοὺς δὲ λεπτοτέρας ἔχειν τὰς ἐντομάς· τὸ δὲ δάκρυον τὸ μὲν καταπίπτειν τὸ δὲ καὶ πρὸς τῷ δένδρῳ προσέχεσθαι. ἐνιαχοῦ μὲν ὑποβεβλήσθαι ψιάθους ἐκ φοινίκων πεπλεγμένας, ἐνιαχοῦ δὲ τὸ ἔδαφος μόνον ἠδαφίσθαι καὶ καθαρὸν εἶναι· καὶ τὸν μὲν ἐπὶ τῶν ψιάθων λιβανωτὸν εἶναι καὶ καθαρὸν καὶ διαφανῆ, τὸν δ' ἐπὶ τῆς γῆς ἦττον· τὸν δ' ἐπὶ τοῖς δένδροις προσεχόμενον ἀποξύνει σιδήροις, δι' ὃ καὶ φλοιὸν ἐνίοις [5] προσεῖναι. τὸ δὲ ὅρος ἅπαν μεμερίσθαι τοῖς Σαβαίοις, τούτους γὰρ εἶναι κυρίους, δικαίους δὲ τὰ πρὸς ἀλλήλους, δι' ὃ καὶ οὐδένα τηρεῖν· ὅθεν καὶ αὐτοὶ δαψιλῶς εἰς τὰ πλοῖα λαβόντες ἐνθέσθαι τοῦ λιβανωτοῦ καὶ τῆς σμύρνης ἐρημίας οὐσης καὶ ἀποπλεῖν. ἔλεγον δ' οὗτοι καὶ τότε καὶ ἔφασαν ἀκούειν, ὅτι συνάγεται πανταχόθεν ἡ σμύρνα καὶ ὁ λιβανωτὸς εἰς τὸ ἱερὸν τὸ

τοῦ ἡλίου· τοῦτο δ' εἶναι μὲν τῶν Σαβαίων ἀγιάτατον δὲ πολὺ τῶν περὶ τὸν τόπον, τηρεῖν δέ τινας Ἄραβας [6] ἐνόπλους· ὅταν δὲ κομίσωσιν, ἕκαστον σωρεύσαντα τὸν αὐτοῦ καὶ τὴν σμύρναν ὁμοίως καταλιπεῖν τοῖς ἐπὶ τῆς φυλακῆς, τιθέναι δὲ ἐπὶ τοῦ σωροῦ πινάκιον γραφὴν ἔχον τοῦ τε πλήθους τῶν μέτρων καὶ τῆς τιμῆς ἧς δεῖπραθῆναι τὸ μέτρον ἕκαστον· ὅταν δὲ οἱ ἔμποροι παραγένωνται, σκοπεῖν τὰς γραφάς, ὅστις δ' ἂν αὐτοῖς ἀρέσκη μετρησαμένους τιθέναι τὴν τιμὴν εἰς τοῦτο τὸ χωρίον ἔνθεν ἂν ἔλονται, καὶ τὸν ἱερέα παραγενόμενον τὸ τρίτον μέρος λαβόντα τῆς τιμῆς τῷ θεῷ τὸ λοιπὸν αὐτοῦ καταλιπεῖν καὶ τοῦτο σὼν εἶναι τοῖς κυρίοις, ἕως ἂν ἔλονται παραγενόμενοι.

[7] Ἄλλοι δέ τινες τὸ μὲν τοῦ λιβανωτοῦ δένδρον ὅμοιον εἶναί φασι σχίνω καὶ τὸν καρπὸν ταῖς σχινίσιν φύλλον δὲ ὑπέρυθρον· εἶναι δὲ τὸν μὲν ἐκ τῶν νέων λιβανωτῶν λευκότερον καὶ ἀοδμότερον, τὸν δ' ἐκ τῶν παρηκμακώτων ξανθότερον καὶ εὐοσμότερον· τὸ δὲ τῆς σμύρνης ὅμοιον τῇ τερμίνθῳ, τραχύτερον δὲ καὶ ἀκανθωδέστερον, φύλλον δὲ μικρῷ στρογγυλότερον, τῇ δὲ γεύσει διαμασσωμένοις ὅμοιον τῷ τῆς τερμίνθου· εἶναι δὲ καὶ τούτων τὰ παρηκμακώτα εὐοσμότερα.

[8] Γίνεσθαι δὲ ἀμφοτέρω ἐν τῷ αὐτῷ τόπῳ· τὴν δὲ γῆν ὑπάργιλον καὶ πλακώδη, καὶ ὕδατα πηγαῖα σπάνια. ταῦτα μὲν οὖν ὑπεναντία τῷ νίφεσθαι καὶ ὕεσθαι καὶ ποταμοὺς ἐξίεναι· τὸ δὲ παρόμοιον εἶναι τὸ δένδρον τῇ τερμίνθῳ καὶ ἄλλοι τινὲς λέγουσιν, οἱ δὲ καὶ ὅλως τέρμινθον εἶναι· κομισθῆναι γὰρ ξύλα πρὸς Ἀντίγονον ὑπὸ τῶν Ἀράβων τῶν τὸν λιβανωτῶν καταγόντων, ἃ οὐδὲν διέφερε τῶν τῆς τερμίνθου· πλὴν οὗτοί γε μεῖζον ἕτερον ἀγνόημα προσηγνόνουν· ᾧοντο γὰρ ἐκ τοῦ αὐτοῦ δένδρου τὸν τε λιβανωτῶν γίνεσθαι καὶ τὴν [9] σμύρναν· διόπερ ἐκεῖνος ὁ λόγος πιθανώτερος ὁ παρὰ τῶν ἀναπλευσάντων ἐξ Ἡρώων πόλεως· ἐπεὶ καὶ τὸ ὑπὲρ Σάρδεων πεφυκὸς τοῦ λιβανωτοῦ δένδρον ἐν ἱερῷ τινι δαφνοειδὲς ἔχει τὸ φύλλον, εἴ τι δεῖ σταθμᾶσθαι τοῦτο· ὁ λιβανωτὸς δ' ἔχει, καὶ ὁ ἐκ τοῦ στελέχους καὶ ὁ ἐκ τῶν ἀκρεμόνων, ὁμοίως καὶ τῇ ὄψει καὶ τῇ ὁσμῇ θυμιώμενος τῷ ἄλλῳ λιβανωτῷ. πέφυκε δὲ τοῦτο μόνον τὸ δένδρον οὐδεμιᾶς τυγχάνειν (θεραπείας).

[10] Ἔνιοι δὲ λέγουσιν ὡς πλείων μὲν ὁ λιβανωτὸς ἐν τῇ Ἀραβίᾳ γίνεται, καλλίων δὲ ἐν ταῖς ἐπικειμέναις νήσοις ὧν ἐπάρχουσιν· ἐνταῦθα γὰρ καὶ σχηματοποιεῖν ἐπὶ τῶν δένδρων οἶον ἂν θέλωσι· καὶ τάχα τοῦτο γε οὐκ ἀπίθανον· ἐνδέχεται (γὰρ) ὁποῖαν ἂν βούλωνται ποιεῖν τὴν ἐντομήν. εἰσὶ δὲ τινες καὶ μεγάλοι σφόδρα τῶν χόνδρων, ὥστ' εἶναι τῷ μὲν ὄγκῳ

χειροπληθιαίους σταθμῷ δὲ πλέον ἢ τρίτον μέρος μνάς. ἀργὸς δὲ κομίζεται πᾶς ὁ λιβανωτός, ὅμοιος δὲ τῇ προσόψει φλοιῷ. τῆς συμύρνης δὲ ἡ μὲν στακτὴ ἢ δὲ πλαστή. δοκιμάζεται δ' ἡ μὲν ἀμείνων τῇ γεύσει, καὶ ἀπὸ ταύτης τὴν ὁμόχρων λαμβάνουσι. περὶ μὲν οὖν λιβανωτοῦ καὶ συμύρνης σχεδὸν τοσαῦτα ἀκηκόαμεν ἄχρι γε τοῦ νῦν.

[5.1] Περὶ δὲ κιναμώμου καὶ κασίας τάδε λέγουσι· θάμνους μὲν ἀμφοτέρα ταῦτ' εἶναι οὐ μεγάλους ἀλλ' ἡλίκους ἄγνου, πολυκλάδους δὲ καὶ ξυλώδεις. ὅταν δὲ ἐκκόψωσιν, ὅλον τὸ κινάμωμον διαιρεῖν εἰς πέντε μέρη· τούτων δὲ τὸ πρῶτον πρὸς τοῖς βλαστοῖς βέλτιστον εἶναι, ὃ τέμνεται σπιθαμιαῖον ἢ μικρῷ μεῖζον· ἐπόμενον δὲ τὸ δεύτερον, ὃ καὶ τῇ τομῇ ἔλαττον· εἶτα τὸ τρίτον καὶ τέταρτον· ἔσχατον δὲ τὸ χεῖριστον τὸ πρὸς τῇ ρίζῃ· φλοιὸν γὰρ ἐλάχιστον ἔχειν· χρήσιμος δὲ οὗτος, οὐ τὸ ξύλον· δι' ὃ καὶ τὸ ἀκροφυὲς κράτιστον, πλεῖστον γὰρ ἔχειν καὶ τὸν φλοιόν. οἱ μὲν οὕτω λέγουσιν.

[2] Ἄλλοι δὲ θαμνώδες μὲν καὶ ἔτι μᾶλλον φρυγανῶδες εἶναί φασι· δύο δ' αὐτοῦ γένη, τὸ μὲν μέλαν τὸ δὲ λευκόν. λέγεται δέ τις καὶ μῦθος ὑπὲρ αὐτοῦ· φύεσθαι μὲν γάρ φασιν ἐν φάραγξιν, ἐν ταύταις δ' ὄφεις εἶναι πολλοὺς δῆγμα θανάσιμον ἔχοντας, πρὸς οὓς φραζάμενοι τὰς χεῖρας καὶ τοὺς πόδας καταβαίνουνσι καὶ συλλέγουσιν, εἴθ' ὅταν ἐξενέγκωσι διελόντες τρία μέρη διακληροῦνται πρὸς τὸν ἥλιον, καὶ ἦν ἂν λάχῃ ὁ ἥλιος καταλείπουσιν· ἀπιόντες δ' εὐθὺς ὁρᾶν φασι καιομένην ταύτην· οὗτος μὲν οὖν τῷ ὄντι μῦθος.

[3] Τὴν δὲ κασίαν φασὶ τὰς μὲν ράβδους παχυτέρας ἔχειν, ἰνώδεις δὲ σφόδρα καὶ οὐκ εἶναι περιφλεῦσαι· χρήσιμον δὲ καὶ ταύτης τὸν φλοιόν. ὅταν οὖν τέμνωσι τὰς ράβδους, κατακόπτειν ὥς διδάκτυλα τὸ μῆκος ἢ μικρῷ μεῖζω, ταῦτα δ' εἰς νεόδορον βύρσαν καταρράπτειν· εἴτ' ἐκ ταύτης καὶ τῶν ξύλων σπητομένων σκωλήκια γίνεσθαι, ἃ τὸ μὲν ξύλον κατεσθίει, τοῦ φλοιοῦ δ' οὐχ ἄπτεται διὰ τὴν πικρότητα καὶ δριμύτητα τῆς ὀσμῆς. καὶ περὶ μὲν κασίας καὶ κιναμώμου τοσαῦτα λέγεται.

[6.1] Τὸ δὲ βάλαμον γίνεται μὲν ἐν τῷ αὐλῶνι τῷ περὶ Συρίαν. παραδείσους δ' εἶναί φασι δύο μόνους, τὸν μὲν ὅσον εἴκοσι πλέθρων τὸν δ' ἕτερον πολλῷ ἐλάττονα. τὸ δὲ δένδρον μέγεθος μὲν ἡλίκον ρόα μεγάλῃ πολύκλαδον δὲ σφόδρα· φύλλον δὲ ἔχειν ὅμοιον πηγάνῳ, πλὴν ἐκλευκον, ἀείφυλλον δὲ εἶναι· καρπὸν δὲ παρόμοιον τῇ τερμίνθῳ καὶ μεγέθει καὶ σχήματι καὶ χρώματι· εὐῶδες σφόδρα καὶ τοῦτο καὶ μᾶλλον τοῦ δακρύου.

[2] Τὸ δὲ δάκρυον ἀπὸ ἐντομῆς συλλέγειν, ἐντέμνειν δὲ ὄνουσι σιδηροῖς ὑπὸ τὸ ἄστρον, ὅταν μάλιστα πνίγη ὥσι, καὶ τὰ στελέχη καὶ τὰ ἄνω. τὴν δὲ

συλλογὴν ὅλον τὸ θέρος ποιεῖσθαι· οὐκ εἶναι δὲ πολὺ τὸ ρέον, ἀλλ' ἐν ἡμέρᾳ τὸν ἄνδρα συλλέγειν ὅσον κόγχην· τὴν δ' ὁσμὴν διαφέρουσιν καὶ πολλήν, ὥστε ἀπὸ μικροῦ πολὺν ἐφικνεῖσθαι τόπον. ἀλλ' οὐ φοιτᾷ ἐνταῦθα ἄκρατον ἀλλὰ τὸ συνηγμένον κεκραμένον· πολλήν γὰρ δέχεσθαι κρᾶσιν· καὶ τὸ ἐν τῇ Ἑλλάδι πολλάκις εἶναι κεκραμένον· εὖοσμα δὲ σφόδρα καὶ τὰ ῥαβδία· [3] καθαίρειν γὰρ καὶ τῶνδε ἔνεκα καὶ τοῦ διαφόρου· πωλεῖσθαι <γὰρ> τίμια. καὶ τὴν ἐργασίαν τὴν περὶ τὰ δένδρα σχεδὸν ἐν ταύτῃ αἰτία εἶναι καὶ τὴν βροχὴν· βρέχεσθαι γὰρ συνεχῶς, συναιτίαν δὲ δοκεῖν εἶναι τοῦ μὴ μεγάλα γίνεσθαι τὰ δένδρα καὶ τὴν τῶν ῥαβδίων τομήν. διὰ γὰρ τὸ πολλάκις ἐπικεῖρεσθαι ῥάβδους ἀφιέναι καὶ οὐκ εἰς ἓν ἐκτείνειν τὴν ὀρμήν.

[4] Ἄγριον δὲ οὐδὲν εἶναι βάλαμον οὐδαμοῦ· γίνεσθαι δὲ ἐκ μὲν τοῦ μεῖζονος παραδείσου ἀγγεῖδια δώδεκα ὅσον ἡμίχοῤᾳ, ἐκ δὲ τοῦ ἐτέρου δύο μόνον· πωλεῖσθαι δὲ τὸ μὲν ἄκρατον δις πρὸς ἀργύριον τὸ δ' ἄλλο κατὰ λόγον τῆς μίξεως· καὶ τοῦτο μὲν διαφέρον τι φαίνεται κατὰ τὴν εὖοσμίαν.

[7.1] Ὁ δὲ κάλαμος γίνεται καὶ ὁ σχοῖνος ὑπερβάλλοντι τὸν Λίβανον μεταξὺ τοῦ τε Λιβάνου καὶ ἄλλου τινὸς ὅρους μικροῦ ἐν τῷ αὐλωνίσκῳ τούτῳ, καὶ οὐχ ὥς τινὲς φασὶ τοῦ Ἀντιλίβανου· ὁ γὰρ Ἀντιλίβανος μακρὰν ἀπέχει τοῦ Λιβάνου καὶ μεταξὺ τούτων ἐστὶν ὃν αὐλῶνα καλοῦσι πεδίον πολὺ καὶ καλόν. ὅπου δὲ ὁ κάλαμος καὶ ὁ σχοῖνος φύεται λίμνη μεγάλη τυγχάνει, πρὸς ταύτην δὲ ἐν τῷ ἔλει τῷ ἀνεξηραμμένῳ πεφύκασιν· τόπον δὲ ἔχουσι πλεῖον ἢ τριάκοντα σταδίων. οὐκ ὄζουσι δὲ χλωροὶ ἀλλὰ ξηρανθέντες, τῇ προσόψει δὲ οὐδὲν διαφέρουσι τῶν ἄλλων· εἰσβάλλοντι δ' εἰς τὸν τόπον εὐθύς ὁσμὴ προσβάλλει· [2] οὐ μὴν πορρωτέρῳ γε ἢ ἀποπονὴ γίνεται, καθάπερ τινὲς φασὶ, ταῖς προσφερομέναις ναυσὶ πρὸς τὴν χώραν· καὶ γὰρ ὁ τόπος οὗτος ἀπὸ θαλάττης ἀπέχει πλείους ἢ ἑκατὸν πεντήκοντα σταδίου· ἀλλ' ἐν τῇ Ἀραβίᾳ τὴν ἀποπονὴν εἶναι φασὶ τὴν ἀπὸ τῆς χώρας εὖοσμον.

Ἐν μὲν οὖν Συρίᾳ τὰ περιττὰ τῇ ὁσμῇ σχεδὸν ταῦτ' ἐστίν· ἡ γὰρ χαλβάνη βαρύτερον καὶ μᾶλλον φαρμακῶδες· ἐπεὶ καὶ αὕτη γίνεται περὶ Συρίαν ἐκ τοῦ πανάκου καλουμένου. τὰ δὲ ἄλλα πάντα τὰ εὖοσμα οἷς πρὸς τὰ ἀρώματα χρῶνται, τὰ μὲν ἐξ Ἰνδῶν κομίζεται κάκεῖθεν ἐπὶ θάλατταν καταπέμπεται, τὰ δ' ἐξ Ἀραβίας, οἷον πρὸς τῷ κινάμῳ καὶ τῇ κασίᾳ καὶ κόμακον· ἕτερον δ' εἶναι τὸ κόμακον καρπὸν· τὸ δ' ἕτερον παραμίσγουσιν εἰς τὰ σπουδαιότατα τῶν μύρων. τὸ δὲ καρδάμωμον καὶ ἄμωμον οἱ μὲν ἐκ Μηδείας, οἱ δ' ἐξ Ἰνδῶν καὶ ταῦτα καὶ τὴν νάρδον καὶ τὰ ἄλλα ἢ τὰ πλεῖστα.

[3] Οἷς μὲν οὖν εἰς τὰ ἀρώματα χρῶνται σχεδὸν τάδε ἐστί· κασία κινάμωμον

καρδάμωμον νάρδος ναῖρον βάλαμον ἀσπάλαθος στύραξ ἴρις νάρτη κόστος
πάνακες κρόκος σμύρνα κύπειρον σχοῖνος κάλαμος ἀμάρακον λωτὸς ἄννητος.
τούτων δὲ τὰ μὲν ρίζαι τὰ δὲ φλοιοὶ τὰ δὲ κλῶνες τὰ δὲ ξύλα τὰ δὲ σπέρματα
τὰ δὲ δάκρυα τὰ δὲ ἄνθη. καὶ τὰ μὲν πολλαχοῦ γίνεται, τὰ δὲ περιττότατα καὶ
εὐοδμότατα πάντα ἐκ τῆς Ἀσίας καὶ ἐκ τῶν ἀλεεινῶν τόπων. ἐκ γὰρ αὐτῆς
Εὐρώπης οὐδὲν ἐστὶν ἔξω τῆς ἱριδος.

[4] Αὕτη δ' ἀρίστη ἐν Ἰλλυριοῖς, οὐκ ἐν τῇ πρὸς θάλατταν χώρα, ἀλλ' ἐν τῇ
ἀνακεχωρηκυῖα κειμένη δὲ μᾶλλον πρὸς ἄρκτον. τόποι δὲ τόπων διαφέρουσιν
ἐν οἷς ἀμείνων· ἐργασία δὲ περὶ αὐτὴν οὐδεμία πλὴν τοῦ περικαθήραντα
ἀναξηρᾶναι.

Τὰ γὰρ ἐν τῇ Θράκῃ φυόμενα ρίζια, καθάπερ τό τε τῇ νάρδῳ προσεμφερῇ
τὴν ὁσμὴν ἔχον καὶ ἕτερ' ἄττα, μικράν τινα καὶ ἀσθενῇ τὴν εὐωδίαν ἔχει. καὶ
περὶ μὲν τῶν εὐόσμων ἐπὶ τοσοῦτον εἰρήσθω.

[8.1] Περὶ δὲ τῶν ὁπῶν ὅσα μὴ πρότερον εἴρηται, λέγω δ' οἷον εἴ τινες
φαρμακώδεις ἢ καὶ ἄλλας ἔχουσι δυνάμεις, πειρατέον ὁμοίως εἰπεῖν· ἅμα δὲ
καὶ περὶ ριζῶν, καὶ γὰρ τῶν ὁπῶν τινες ἐκ τούτων καὶ χωρὶς αὐταὶ καθ' αὐτάς
πολλὰς καὶ παντοίας ἔχουσι δυνάμεις, ὅλως δὲ περὶ πάντων φαρμακωδῶν,
οἷον καρποῦ χυλισμοῦ φύλλων ριζῶν πόας· καλοῦσι γὰρ καὶ πόαν ἔνια τῶν
φαρμακωδῶν οἱ ριζοτόμοι.

Τῶν δὲ ριζῶν πλείους μὲν εἰσιν αἱ δυνάμεις καὶ πρὸς πλείω· ζητοῦνται δὲ
μάλιστα αἱ φαρμακώδεις ὥς χρησιμώταται, διαφέρουσαι τῷ τε μὴ πρὸς ταῦτά
καὶ τῷ μὴ ἐν τοῖς αὐτοῖς ἔχειν τὴν δύναμιν. ὥς δ' οὖν ἐπὶ πᾶν αἱ πλείσται μὲν
ἐν αὐταῖς ἔχουσι καὶ τοῖς καρποῖς καὶ τοῖς ὀποῖς, ἔναι δὲ καὶ ἐν τοῖς φύλλοις·
τάς δὲ φυλλώδεις δυνάμεις τὰς πολλὰς σχεδὸν πόας καλοῦσιν, ὥσπερ εἴρηται
μικρῷ πρότερον, οἱ ριζοτόμοι.

[2] Ὁ μὲν οὖν ὀπισμὸς γίνεται τῶν ὀπιζομένων ὥς ἐπὶ τὸ πολὺ τοῦ θέρους,
τῶν μὲν ἐνισταμένου τῶν δὲ προεληλυθότος. ἢ δὲ ριζοτομία γίνεται τινῶν καὶ
ὑπὸ πυροτομίαν καὶ μικρῷ πρότερον, οὐ μὴν ἄλλ' ἢ γε πλείων τοῦ μετοπώρου
μετ' Ἀρκτοῦρον, ὅταν φυλλορροήσωσιν, ὅσων δὲ καὶ ὁ καρπὸς χρήσιμος,
ὅταν ἀμερθῶσι τὸν καρπὸν. ἔστι δὲ ὁ ὀπισμὸς ἢ ἀπὸ τῶν καυλῶν, ὥσπερ τοῦ
τιθυμάλλου καὶ τῆς θριδακίνης καὶ σχεδὸν τῶν πλείστων, ἢ ἀπὸ τῶν ριζῶν, ἢ
τρίτον ἀπὸ τῆς κεφαλῆς, ὥσπερ τῆς μήκωνος· ταύτης γὰρ μόνης οὕτω καὶ
τοῦτ' ἴδιον αὐτῆς. τῶν μὲν οὖν καὶ αὐτόματος ὁ ὀπὸς συνίσταται δακρυώδης
τις, ὥσπερ καὶ τῆς τραγακάνθης· ταύτην γὰρ οὐδὲ τέμνειν ἐστί· τῶν δὲ
πλείστων ἀπὸ τῆς ἐντομῆς. ὧν ἐνίους μὲν εὐθύς εἰς ἀγγεῖα συναγοῦσιν, ὥσπερ

καὶ τὸν τοῦ τιθυμάλλου ἢ μηκωνίου, καλοῦσι γὰρ ἀμφοτέρως, καὶ ἀπλῶς ὅσα πολυόπα τυγχάνει τῶν δὲ μὴ πολυόπων ἐρίῳ λαμβάνουσιν ὥσπερ καὶ τῆς θριδακίνης.

[3] Ἐνίων δ' οὐδ' ὀπισμὸς ἀλλ' οἶον χυλισμὸς ἐστίν, ὥσπερ ὅσα κόψαντες ἢ τρίψαντες καὶ ὕδωρ ἐπιχέαντες ἀπηθοῦσι καὶ λαμβάνουσιν τὴν ὑπόστασιν· ξηρὸς δὲ δῆλον ὅτι καὶ ἐλάττων ὁ χυλὸς τούτων. ἔστι δὲ τῶν μὲν ἄλλων ῥιζῶν τὸ χύλισμα ἀσθενέστερον τοῦ καρποῦ, τοῦ κωνείου δὲ ἰσχυρότερον, καὶ τὴν ἀπαλλαγὴν ῥᾶω ποιεῖ καὶ θάττω μικρὸν πάνυ καταπότιον δοθέν· ἐνεργότερον δὲ καὶ εἰς τὰς ἄλλας χρείας, ἰσχυρὸν δὲ καὶ τὸ τῆς θαψίας. τὰ δὲ ἄλλα πάντα ἀσθενέστερα. οἱ μὲν οὖν ὀπισμοὶ σχεδὸν τοσαυταχῶς γίνονται.

[4] Τῆς δὲ ῥιζοτομίας οὐκ ἔστι τοιαύτη διαφορὰ πλὴν ἐν ταῖς ὥραις οἶον θέρους ἢ μετοπώρου, καὶ τῷ τάσδε ἢ τάσδε τῶν ῥιζῶν· οἶον τοῦ ἐλλεβόρου τὰς κάτω τὰς λεπτὰς· τὴν γὰρ ἄνω τὴν παχεῖαν τὴν κεφαλῶδη φασὶν ἀχρεῖον εἶναι καὶ διδόναι ταῖς κυσὶν ὅταν βούλωνται καθαίρειν. καὶ ἐφ' ἐτέρων δὲ τινων τοιαύτας λέγουσι διαφοράς.

[5] Ἔτι δὲ ὅσα οἱ φαρμακοπῶλαι καὶ οἱ ῥιζοτόμοι τὰ μὲν ἴσως οἰκείως τὰ δὲ καὶ ἐπιτραγωδούντες λέγουσι. κελεύουσι γὰρ τὰς μὲν κατ' ἄνεμον ἰσταμένους τέμνειν, ὥσπερ ἐτέρας τέ τινας καὶ τὴν θαψίαν, ἀλειψάμενον λίπα· τὸ γὰρ σῶμα ἀνοιδεῖν ἐὰν ἐξ ἐναντίας. κατ' ἄνεμον δὲ καὶ τοῦ κυνοσβάτου τὸν καρπὸν συλλέγειν, εἰ δὲ μὴ κίνδυνον εἶναι τῶν ὀφθαλμῶν. τὰς δὲ νύκτωρ τὰς δὲ μεθ' ἡμέραν, ἐνίας δὲ πρὶν τὸν ἥλιον ἐπιβάλλειν, οἶον καὶ τὸ καλούμενον κλύμενον.

[6] Καὶ ταῦτα μὲν καὶ τὰ παραπλήσια τούτοις τάχ' ἂν οὐκ ἄλλοτρίως δόξειεν λέγειν· ἐπισινεῖς γάρ τινων αἱ δυνάμεις· ἐξάπτειν γὰρ φασὶν ὥσπερ πῦρ καὶ κατακαίειν· ἐπεὶ καὶ ὁ ἐλλέβορος ταχὺ καρηβαρεῖν ποιεῖ, καὶ οὐ δύνανται πολὺν χρόνον ὀρύττειν, δι' ὃ καὶ προσεσθίουσι σκόροδα καὶ ἄκρατον ἐπιπίνουσιν. ἀλλὰ τὰ τοιαῦτα ὥσπερ ἐπίθετα καὶ πόρρωθεν, οἶον τὴν παιωνίαν. οἱ δὲ γλυκυσιδὴν καλοῦσι, νύκτωρ κελεύουσιν ὀρύττειν· ἐὰν γὰρ ἡμέρας καὶ ὀφθῇ τις ὑπὸ δρυοκολάπτου τὸν μὲν καρπὸν ἀπολέγων κινδυνεύειν τοῖς ὀφθαλμοῖς, τὴν δὲ ῥίζαν τέμνων ἐκπίπτειν τὴν ἔδραν.

[7] Φυλάττεσθαι δὲ καὶ τὴν κενταυρίδα τέμνοντα τριόρχην, ὅπως ἂν ἄτρωτος ἀπέλθῃ. καὶ ἄλλας δὲ τινας αἰτίας. τὸ δ' ἐπευχόμενον τέμνειν οὐθὲν ἴσως ἄτοπον· ἀλλ' εἴ τι καὶ ἄλλο προστιθέασιν, οἶον ὅταν τὸ πάνακες τὸ Ἀσκληπίειον καλούμενον· ἀντεμβάλλειν γὰρ τῇ γῇ παγκαρπίαν «καὶ» μελιττοῦταν· ὅταν δὲ τὴν ξίριν, τριμήνου μελιττούτας ἀντεμβάλλειν μισθόν·

τέμνειν δὲ ἀμφήκει ξίφει περιγράψαντα εἰς τρίς· καὶ ὅτι ἂν πρῶτον τμηθῇ μετέωρον ἔχειν εἴθ' οὕτω τὸ ἕτερον τέμνειν.

[8] Καὶ ἄλλα δὲ τοιαῦτα πλείω. περιγράφειν δὲ καὶ τὸν μανδραγόραν εἰς τρίς ξίφει, τέμνειν δὲ πρὸς ἐσπέραν βλέποντα. τὸν δ' ἕτερον κύκλω περιορχεῖσθαι καὶ λέγειν ὡς πλεῖστα περὶ ἀφροδισίων. τοῦτο δ' ὅμοιον ἔοικε τῷ περὶ τοῦ κυμίνου λεγομένῳ κατὰ τὴν βλασφημίαν ὅταν σπείρωσι. περιγράφειν δὲ καὶ τὸν ἐλλέβορον τὸν μέλανα καὶ τέμνειν ἰστάμενον πρὸς ἕω καὶ κατευχόμενον· ἀετὸν δὲ φυλάττεσθαι καὶ ἐκ δεξιᾶς καὶ ἐξ ἀριστερᾶς· κίνδυνον γὰρ εἶναι τοῖς τέμνουσιν, ἐάνπερ ἐγγὺς ἐπιγένηται ὁ ἀετός, ἀποθνήσκειν ἐνιαυτῷ. ταῦτα μὲν οὖν ἐπιθέτοις ἔοικεν, ὥσπερ εἴρηται. τρόποι δ' οὐκ εἰσὶ τῶν ρίζοτομιῶν πλὴν οὓς εἵπομεν.

[9.1] Ἔστι δέ, ὥσπερ ἐλέχθη, τῶν μὲν πάντα χρήσιμα καὶ ἡ ρίζα καὶ ὁ καρπὸς καὶ ὁ ὀπός, ὥσπερ ἄλλων τε καὶ τοῦ πανάκου· τῶν δὲ ἡ ρίζα καὶ ὁ ὀπός, οἷον τῆς σκαμμωνίας καὶ τοῦ κυκλαμίνου καὶ τῆς θαψίας καὶ ἐτέρων, καθάπερ καὶ τοῦ μανδραγόρου· τοῦ γὰρ μανδραγόρου τὸ φύλλον χρήσιμον εἶναι φασὶ πρὸς τὰ ἔλκη μετ' ἀλφίτου, τὴν δὲ ρίζαν πρὸς ἐρυσίτελας ξυσθεῖσάν τε καὶ ὄξει δευθεῖσαν καὶ πρὸς τὰ ποδαγρικὰ καὶ πρὸς ὕπνον καὶ πρὸς φίλτρα· διδῶσιν δ' ἐν οἴνῳ ἢ ὄξει· τέμνουσι δὲ τροχίσκους ὥσπερ ῥαφανίδος καὶ ἐνείραντες ὑπὲρ γλεύκους ἐκρέμασαν ἐπὶ καπνῷ.

[2] Ὁ δὲ ἐλλέβορος ἐπὶ ταῦτά τῇ τε ρίζῃ καὶ τῷ καρπῷ χρήσιμος, εἴπερ οἱ ἐν Ἀντικύρᾳ, καθάπερ φασί, τῷ καρπῷ καθαίρουσιν· ἔχει δὲ <τὸν> σησαμώδη τοῦτον.

Πλείω δὲ καὶ τοῦ πανάκου τὰ χρήσιμα καὶ οὐ πάντα πρὸς τὰ αὐτά· ἀλλ' ὁ μὲν καρπὸς πρὸς τὰς ἐξαμβλώσεις καὶ τὰς δυσουρίας, ὁ δὲ ὀπός ἡ χαλβάνη καλουμένη πρὸς τε τὰς ἐξαμβλώσεις καὶ πρὸς τὰ σπάσματα καὶ τοὺς τοιούτους πόνους, ἔτι δὲ πρὸς τὰ ὄντα καὶ τὰς φωνασκίας· ἡ δὲ ρίζα πρὸς τε τοὺς τόκους καὶ τὰ γυναικεῖα καὶ πρὸς ὑποζυγίων φύσας· χρησίμη δὲ καὶ πρὸς τὸ ἵρινον μύρον διὰ τὴν εὐωδίαν· ἰσχυρότερον δὲ τὸ σπέρμα τῆς ρίζης. γίνεται δὲ περὶ Συρίαν καὶ τέμνεται περὶ πυραμητόν.

[3] Τοῦ δὲ κυκλαμίνου ἡ μὲν ρίζα πρὸς τε τὰς ἐκπυήσεις τῶν φλεγμονῶν καὶ πρόσθετον γυναιξὶ καὶ πρὸς τὰ ἔλκη ἐν μέλιτι· ὁ δὲ ὀπός πρὸς τὰς ἀπὸ κεφαλῆς καθάρσεις ἐν μέλιτι ἐγχρόμενος, καὶ πρὸς τὸ μεθύσκειν, ἐὰν ἐν οἴνῳ διαβρέχων διδῷ τις πίνειν. ἀγαθὴν δὲ τὴν ρίζαν καὶ ὠκυτόκιον περιάπτον καὶ εἰς φίλτρα· ὅταν δὲ ὀρύξωσι, κατακαίουσιν εἴτ' οἴνῳ δεύσαντες τροχίσκους ποιοῦσιν, ὥσπερ τῆς τρυγὸς ἢ ῥυπτόμεθα.

[4] Καὶ τοῦ σικύου δὲ τοῦ ἀγρίου τὴν μὲν ρίζαν <πρὸς> ἀλφουὺς καὶ ψώρας βοσκημάτων· τὸ δὲ σπέρμα χυλισθὲν ποιεῖ τὸ ἐλατήριον. συλλέγεται δὲ τοῦ φθινοπώρου· τότε γὰρ βέλτιστον.

[5] Τῆς δὲ χαμαΐδρου τὰ μὲν φύλλα πρὸς τὰ ρήγματα καὶ πρὸς τὰ τραύματα ἐν ἐλαίῳ τριβόμενα καὶ πρὸς τὰ νεμόμενα ἔλκη· τὸν δὲ καρπὸν καθαίρειν χολήν· ἀγαθὸν δὲ καὶ ὀφθαλμοῖς· πρὸς δὲ τὰ ἄργεμα προσάγειν τὸ φύλλον τρίψαντα ἐν ἐλαίῳ. ἔχει δὲ φύλλα μὲν οἷα περ δρυὺς, τὸ δὲ ἀνάστημα τῆς ὅλης ὅσον σπιθαμιαῖον· εὖοσμον δὲ καὶ ἡδύ.

Τὸ μὲν οὖν μὴ πρὸς ταυτὸ πάντα τὰ μέρη χρήσιμα τυγχάνειν οὐκ ἴσως ἄτοπον· τὸ δὲ τῆς αὐτῆς ρίζης τὸ μὲν ἄνω τὸ δὲ κάτω καθαίρειν θαυμασιώτερον, οἷον καὶ τῆς θαψίας καὶ τῆς ἰσχάδος, οἱ δ' ἄπιον καλοῦσι, καὶ τῆς λιβανωτίδος· ὅτι γὰρ αὐτὰ καὶ κάτω καὶ ἄνω ταυτὰ δύναται [καθαίρειν], καθάπερ τὸ ἐλατήριον, οὐθὲν ἄτοπον.

[6] Ἐχει δὲ ἡ θαψία φύλλον μὲν ὅμοιον τῷ μαράθῳ πλὴν πλατύτερον καυλὸν δὲ ναρθηκῶδη ρίζαν δὲ λευκὴν.

Ἡ δ' ἰσχὰς ἡ ἄπιος φύλλον μὲν ἔχει πηγανῶδες βραχὺ καυλοῦς δ' ἐπιγεῖους τρεῖς ἢ τέτταρας ρίζαν δὲ οἷαν περ ὁ ἀσφόδελος πλὴν λευριώδη· φιλεῖ δὲ ὀρεῖνὰ χωρία καὶ κοχλακῶδη. συλλέγεται δὲ τοῦ ἥρος. τοῦτο μὲν οὖν ἴδιον τῶν εἰρημένων.

[10.1] Ὁ δὲ ἐλλέβορος ὃ τε μέλας καὶ ὁ λευκὸς ὥσπερ ὁμώνυμοι φαίνονται· περὶ δὲ τῆς ὀψεως διαφωνοῦσιν· οἱ μὲν γὰρ ὁμοίους εἶναι, πλὴν τῷ χρώματι μόνον διαφέρειν τὴν ρίζαν τοῦ μὲν λευκὴν τοῦ δὲ μέλαιναν· οἱ δὲ τοῦ μὲν μέλανος τὸ φύλλον δαφνῶδες τοῦ δὲ λευκοῦ πρασῶδες, τὰς δὲ ρίζας ὁμοίας πλὴν τῶν χρωμάτων. οἱ δ' οὖν ὁμοίους λέγοντες τοιάνδε φασὶν εἶναι τὴν μορφήν· καυλὸν μὲν ἀνθερικῶδη βραχὺν σφόδρα· φύλλον δὲ πλατύσχιστον, παρόμοιον σφόδρα τῷ τοῦ νάρθηκος, μῆκος δ' ἔχον· εὐθὺ δ' ἐκ τῆς ρίζης ἡρτημένον καὶ ἐπιγεῖοφύλλον· πολύρριζον δ' εὖ μάλα ταῖς λεπταῖς καὶ χρησίμοις.

[2] Ἀναρεῖν δὲ τὸν μὲν μέλανα καὶ ἵππους καὶ βοῦς καὶ ὄες, δι' ὃ καὶ οὐδὲν νέμεσθαι τούτων· τὸν δὲ λευκὸν νέμεσθαι τὰ πρόβατα καὶ ἐκ τούτου πρῶτον συνοφθῆναι τὴν δύναμιν καθαιρομένων ἐκείνων· ὥραϊος δὲ μετοπώρου, τοῦ δ' ἥρος ἄωρος· ἀλλὰ πρὸς τὴν πυλαίαν οἱ ἐκ τῆς Οἴτης συλλέγουσι· πλεῖστος γὰρ ἐνταῦθα φύεται καὶ ἄριστος· μοναχοῦ δὲ φύεται τῆς Οἴτης περὶ τὴν Πυράν.

Μίσγεται δὲ πρὸς τὴν πόσιν, ὅπως εὐεμὲς ἦ, τὸ τῆς ἐλλεβορίνης σπέρμα·

τοῦτο δ' ἐστὶ ποάριον.

[3] Φύεται δὲ ὁ μὲν μέλας πανταχοῦ· καὶ γὰρ ἐν τῇ Βοιωτίᾳ καὶ ἐν Εὐβοίᾳ καὶ παρ' ἄλλοις πολλοῖς· ἄριστος δὲ ὁ ἐκ τοῦ Ἑλικῶνος, καὶ ὅλως τὸ ὅρος εὐφάρμακον. ὁ δὲ λευκὸς ὀλιγαχοῦ· βέλτιστοι δὲ καὶ οἷς χρῶνται μάλιστα τέτταρες ὁ Οἰταῖος ὁ Ποντικός ὁ Ἑλεάτης ὁ Μαλιώτης. φασὶ δὲ τὸν Ἑλεάτην ἐν τοῖς ἀμπελῶσι φύεσθαι καὶ ποιεῖν τὸν οἶνον οὕτω διουρητικὸν ὥστε λαγαροῦς εἶναι πάνυ τοὺς πίνοντας.

[4] Ἄριστος δὲ πάντων καὶ τούτων καὶ τῶν ἄλλων ὁ Οἰταῖος. ὁ δὲ Παρνασίος καὶ ὁ Αἰτωλικός, γίνεται γὰρ καὶ ἐνταῦθα καὶ πολλοὶ καὶ ὠνοῦνται καὶ πωλοῦσιν οὐκ εἰδότες, [οὐχ ὅτε] σκληροὶ καὶ ἄγαν περισκελεῖς. ταῦτα μὲν οὖν ὅμοια ταῖς μορφαῖς ὄντα ταῖς δυνάμεσι διαφέροντα.

Καλοῦσι δὲ τὸν μέλανά τινες ἔκτομον Μελαμπόδιον, ὡς ἐκείνου πρῶτον τεμόντος καὶ ἀνευρόντος. καθαίρουσι δὲ καὶ οἰκίας αὐτῷ καὶ πρόβατα συνεπάδοντές τινα ἐπωδὴν καὶ εἰς ἄλλα δὲ πλείω χρῶνται.

[11.1] Πολλὰ δὲ ἐστὶ καὶ τὰ πανάκη καὶ οἱ τιθύμαλλοι καὶ ἕτερ' ἄττα. πάνακες γὰρ καλοῦσι πρῶτον μὲν τὸ ἐν Συρίᾳ, περὶ οὗ μικρῷ πρότερον εἴρηται. ἄλλα δὲ τὰ τρία, τὸ μὲν Χειρώνειον καλούμενον τὸ δ' Ἀσκληπίειον τὸ δ' Ἡράκλειον. ἔχει δὲ τὸ μὲν Χειρώνειον φύλλον μὲν ὅμοιον λαπάθῳ μεῖζον δὲ καὶ δασύτερον, ἄνθος δὲ χρυσοειδές, ρίζαν δὲ μικράν· φιλεῖ δὲ μάλιστα τὰ χωρία τὰ πίονα· χρῶνται δὲ πρὸς τε τοὺς ἔχεις καὶ τὰ φαλάγγια καὶ τοὺς σῆπας καὶ τὰ ἄλλα ἐρπετὰ διδόντες ἐν οἴνῳ καὶ ἀλείφοντες μετ' ἐλαίου· τοῦ δ' ἔχεως τὸ δῆγμα καὶ καταπλάττοντες καὶ ἐν ὀξίνῃ πιεῖν διδόντες· ἀγαθὴν δὲ φασὶ καὶ ἐλκῶν ἐν οἴνῳ καὶ ἐλαίῳ καὶ φυμάτων ἐν μέλιτι.

[2] Τὸ δ' Ἀσκληπίειον τὴν ρίζαν μῆκος μὲν ὡς σπιθαμὴν λευκὴν δὲ καὶ παχεῖαν σφόδρα, καὶ φλοιὸν παχὺν καὶ ἄλυκώδη· καυλὸν δὲ ἔχει γονατώδη πανταχόθεν, φύλλον δὲ οἷόνπερ ἡ θαψία πλὴν παχύτερον· ἀγαθὸν δὲ εἶναι φασὶ ἐρπετῶν τε ζύοντα πίνειν, καὶ σπληνὸς ὅταν αἷμα περὶ αὐτὸν ἐν μελικράτῳ, καὶ κεφαλαίας τρίβοντα ἐν ἐλαίῳ ἀλείφειν καὶ ἄλλο τι εἰάν πονηῇ τις ἀφανές, καὶ γαστρὸς ὀδύνης ἐν οἴνῳ ζύοντα. δύνασθαι δὲ καὶ τὰς μακρὰς ἀρρωστίας ἐκκλίνειν. ἔπειτα τῶν ἐλκῶν τῶν μὲν ὑγρῶν ξηρὸν ἐπιπάττοντα προκατακλύζοντα ἐν οἴνῳ θερμῷ, τῶν δὲ ξηρῶν ἐν οἴνῳ δεῦσαι καὶ καταπλάττειν.

[3] Τὸ δ' Ἡράκλειον φύλλον μὲν ἔχει μέγα καὶ πλατὺ καὶ τρισπίθαμον πανταχῇ, ρίζαν δὲ ὡς δακτύλου τὸ πάχος δίκραν ἢ τρίκραν, τῇ γεύσει μὲν ὑπόπικρον τῇ δ' ὁσμῇ καθάπερ λιβανωτοῦ καθαροῦ· ἀγαθὴν δὲ τῆς ἱερᾶς

νόσου μινυμένην φώκης πιτύα ὅσον τεταρτημόριον πίνειν, καὶ ὀδύνης κατὰ γαστέρα ἐν οἶνῳ γλυκεῖ, καὶ ἐλκῶν τῶν μὲν ὑγρῶν ξηρὰν τῶν δὲ ξηρῶν ἐν μέλιτι. αὐται μὲν οὖν ταύτας ἔχουσι διαφοράς τε καὶ δυνάμεις.

[4] Ἄλλα δὲ πανάκη τὸ μὲν λεπτόφυλλον τὸ δὲ οὐ· αἱ δὲ δυνάμεις ἀμφοῖν αἱ αὐταί, πρόσθετόν τε γυναιξὶ καὶ κατάπλασμα μετ' ἀλφίτου καὶ πρὸς τὰ ἔλκη τὰ ἄλλα καὶ πρὸς τὰ νεμόμενα.

[5] Συνώνυμοι δὲ καὶ οἱ στρύχνοι καὶ οἱ τιθύμαλλοι. τῶν γὰρ στρύχνων ὁ μὲν ὑπνώδης ὁ δὲ μανικός. καὶ ὁ μὲν ὑπνώδης ἐρυθρὰν ἔχων τὴν ρίζαν ὥσπερ αἷμα ξηραίνομένην, ὀρυττομένην δὲ λευκὴν, καὶ καρπὸν ἐρυθρότερον κρόκου, φύλλον δὲ τιθυμάλλω ὅμοιον ἢ μηλέα τῇ γλυκεῖα καὶ αὐτὸ δασὺ καὶ πυγμὴν μέγα. τούτου τῆς ρίζης τὸν φλοιὸν κόπτοντες λίαν καὶ βρέχοντες ἐν οἶνῳ ἀκράτῳ διδόασι πιεῖν καὶ ποιεῖ καθεύδειν. φύεται δὲ ἐν χαράδραις καὶ τοῖς μνήμασιν.

[6] Ὁ δὲ μανικός, οἱ δὲ θρύορον καλοῦσιν αὐτὸν οἱ δὲ περιττόν, λευκὴν ἔχει τὴν ρίζαν καὶ μακρὰν ὡς πήχεως καὶ κοίλην. δίδοται δ' αὐτῆς, ἐὰν μὲν ὥστε παίζειν καὶ δοκεῖν ἑαυτῷ κάλλιστον εἶναι, δραχμὴ σταθμῷ· ἐὰν δὲ μᾶλλον μαίνεσθαι καὶ φαντασίας τινὰς φαίνεσθαι, δύο δραχμαί· ἐὰν δ' ὥστε μὴ παύεσθαι μαινόμενον τρεῖς, καὶ συμπαραμινγύναι φασὶν ὅπῃ κενταυρίου· ἐὰν δὲ ὥστε ἀποκτεῖναι, τέτταρες. ἔχει δὲ τὸ μὲν φύλλον ὅμοιον εὐζώμῳ πλὴν μεῖζον, τὸν δὲ καυλὸν ὥσπερ ὀργυῖας, κεφαλὴν δὲ ὥσπερ γηθίου μεῖζον δὲ καὶ δασυτέραν· ἔοικε δὲ καὶ πλατάνου καρπῷ.

[7] Τῶν δὲ τιθυμάλλων ὁ μὲν παράλιος καλούμενος κόκκινον φύλλον ἔχει περιφερές, καυλὸν δὲ καὶ τὸ ὅλον μέγεθος ὡς σπιθαμῆς τὸν δὲ καρπὸν λευκόν. ἀμᾶται δὲ ὅταν ἄρτι περκάζῃ σταφυλὴ, καὶ ξηρανθεὶς ὁ καρπὸς δίδοται πίνειν τριφθεὶς ὅσον τρίτον μέρος ὀξυβάφου.

[8] Ὁ δ' ἄρην καλούμενος τὸ μὲν φύλλον ἐλαιῶδες ἔχει, τὸ δὲ ὅλον μέγεθος πηχυαῖον. τοῦτον ὀπίζουσιν ἅμα τρυγητῷ καὶ θεραπεύσαντες οὕτως ὡς δεῖ χρῶνται· καθαίρει δὲ κάτω μᾶλλον.

[9] Ὁ δὲ μυρτίτης καλούμενος τιθύμαλλος λευκός· τὸ μὲν φύλλον ἔχει καθάπερ ὁ μύρρινος, πλὴν ἀκανθῶδες ἀπ' ἄκρου· κλήματα δ' ἀφίησιν ἐπὶ τὴν γῆν ὡς σπιθαμιαῖα, ταῦτα δ' οὐχ ἅμα φέρει τὸν καρπὸν ἀλλὰ παρ' ἑτος, τὰ μὲν νῦν τὰ δ' εἰς νέωτα, πεφυκότα ἀπὸ τῆς αὐτῆς ρίζης. φιλεῖ δὲ ὀρεινὰ χωρία. ὁ δὲ καρπὸς αὐτοῦ καλεῖται κάρυον. ἀμῶσι δ' ὅταν ἀδρύνωνται αἱ κριθαὶ καὶ ξηραίνοντες καὶ ἀποκαθαίροντες· αὐτὸν τὸν καρπὸν πλύναντες ἐν ὕδατι καὶ πάλιν ξηρὰντες διδόασι πιεῖν συμμινγύντες δύο μέρη τῆς μελαίνης

μήκωνος, τὸ δὲ συναμφοτέρων ὅσον ὀξύβαφον· καθαίρει δὲ φλέγμα κάτω· ἐὰν δὲ τὸ κάρυον αὐτὸ διδῶσι, τρίψαντες ἐν οἶνῳ γλυκεῖ διδόασιν ἢ ἐν σιδήρῳ πεφρυγμένῳ κατατραγεῖν. ταῦτα μὲν οὖν τοῖς τε φύλλοις καὶ τοῖς ὀποῖς καὶ τοῖς καρποῖς χρήσιμα.

[10] Τῶν δὲ λιβανωτίδων, δύο γάρ εἰσιν, ἡ μὲν ἄκαρπος ἡ δὲ κάρπιμος, ἡ μὲν καὶ τῷ καρπῷ καὶ τῷ φύλλῳ χρησίμη ἡ δὲ μόνον τῇ ῥίζῃ. καλεῖται δὲ ὁ καρπὸς κάχρυ. ἔχει δὲ αὕτη τὸ μὲν φύλλον ἐοικὸς σελίνῳ ἐλείφει μείζον δὲ πολὺ, καυλὸν δὲ μέγεθος πήχεως ἢ μείζω, ῥίζαν δὲ μεγάλην καὶ παχεῖαν λευκὴν ὄζουσαν ὥσπερ λιβανωτοῦ, καρπὸν δὲ λευκὸν τραχὺν προμήκη· φύεται δὲ μάλιστα ὅπου ἂν αὐχμηρὰ χωρία ἦ καὶ πετρώδη· χρησίμη δὲ ἡ μὲν ῥίζα πρὸς τε τὰ ἔλκη καὶ πρὸς τὰ γυναικεῖα πινομένη ἐν οἶνῳ αὐστηρῷ μέλανι· ὁ δὲ καρπὸς πρὸς τε τὰς στραγγουρίας καὶ πρὸς τὰ ὄτα καὶ ἄργεμα καὶ πρὸς ὀφθαλμίας καὶ ὥστε γάλα γυναιξὶν ἐμποιεῖν.

[11] Ἡ δὲ ἄκαρπος ἔχει τὸ φύλλον ὅμοιον θριδακίνης τῆς πικρᾶς τραχύτερον δὲ καὶ λευκότερον, ῥίζαν δὲ βραχεῖαν. φύεται δὲ ὅπουπερ ἐρεῖκη πλείστη. δύναται δὲ ἡ ῥίζα καθαίρειν καὶ ἄνω καὶ κάτω· τὸ μὲν γὰρ πρὸς τὴν βλάστην ἄνω, τὸ δὲ πρὸς τὴν γῆν κάτω· κωλύει δὲ καὶ εἰς ἱμάτια τιθεμένη τοὺς σῆτας. συλλέγεται δὲ περὶ πυροτομίας.

[12.1] Χαμαιλέων δὲ ὁ μὲν λευκὸς ὁ δὲ μέλας· αἱ δὲ δυνάμεις τῶν ῥιζῶν καὶ αὐταὶ δὲ αἱ ῥίζαι τοῖς εἶδεσι διάφοροι. τοῦ μὲν γὰρ λευκῆ καὶ παχεῖα καὶ γλυκεῖα καὶ ὀσμὴν ἔχουσα βαρεῖαν· χρήσιμον δὲ φασι πρὸς τε τοὺς ῥόυς, ὅταν ἐψηθῇ κατατμηθεῖσα καθάπερ ῥαφανὶς ἐνευρομένη ἐφ' ὀλοσχοίνου, καὶ πρὸς τὴν ἔλμινθα τὴν πλατεῖαν, ὅταν ἀσταφίδα προφάγῃ πίνειν ἐπιζύοντα ταύτην ὅσον ὀξύβαφον ἐν οἶνῳ αὐστηρῷ. ἀναιρεῖ δὲ καὶ κύνα καὶ σὺν· κύνα μὲν ἐν ἀλφίτοις ἀναφυραθεῖσα μετὰ ἐλαίου καὶ ὕδατος, σὺν δὲ μετὰ ῥαφάνων μεμιγμένη τῶν ὀρείων. γυναικὶ δὲ δίδεται ἐν τρυγί γλυκεῖα ἢ ἐν οἶνῳ γλυκεῖ. καὶ ἐὰν βούληται τις ἀσθενοῦντος ἀνθρώπου διαπειρᾶσθαι εἰ βιώσιμος, λούειν κελεύουσι τρεῖς ἡμέρας, κἂν περιενέγκῃ βιώσιμος. φύεται δὲ ὁμοίως πανταχοῦ, καὶ ἔχει τὸ φύλλον ὅμοιον σκολύμῳ μείζον δέ· αὐτὸ δὲ πρὸς τῇ γῇ τινα κεφαλὴν ἔχει ἀκανοειδῇ μεγάλῃν, οἱ δὲ καὶ ἄκανον καλοῦσιν.

[2] Ὁ δὲ μέλας τῷ μὲν φύλλῳ παρόμοιος, σκολυμῶδες γὰρ ἔχει πλὴν ἔλαττον καὶ λειότερον, αὐτὸς δ' ὅλος ἐστὶν ὥσπερ σκιάδιον, ἡ δὲ ῥίζα παχεῖα καὶ μέλαινα διαρραγεῖσα δὲ ὑπόξανθος. χωρία δὲ φιλεῖ ψυχρὰ καὶ ἀργά· δύναται δὲ λέπραν τε ἐξελαύνειν ἐν ὅξει τριβόμενος καὶ ξυσθεὶς ἐπαλειφόμενος καὶ ἀλφὸν ὡσαύτως· ἀναιρεῖ δὲ καὶ τοὺς κύνας.

[3] Μήκωνες δ' εἰσιν ἄγριαι πλείους· ἡ μὲν κερατῖτις καλουμένη μέλαινα· ταύτης τὸ φύλλον ὥσπερ φλόμου τῆς μελαίνης ἦττον δὲ μέλαν, τοῦ δὲ καυλοῦ τὸ ὕψος ὡς πηχυαῖον, ῥίζα δὲ παχεῖα καὶ ἐπιπόλαιος, ὁ δὲ καρπὸς καμπύλος ὥσπερ κεράτιον· συλλέγεται δὲ περὶ πυροτομίας. δύναται δὲ καθαίρειν κοιλίαν, τὸ δὲ φύλλον ἄργεμα προβάτοις ἀφαιρεῖν. φύεται δὲ παρὰ θάλατταν, οὗ ἂν ἦ πετρώδη χωρία.

[4] Ἐτέρα δὲ μήκων ῥοιὰς καλουμένη παρομοία κιχορίῳ τῷ ἀγρίῳ, δι' ὃ καὶ ἐσθίεται· ἐν τοῖς ἀρουραίοις δὲ φύεται, μάλιστα ἐν ταῖς κριθαῖς· ἄνθος δ' ἔχει ἐρυθρὸν κωδύαν δ' ὅσῃν ὄνυχα τοῦ δακτύλου. συλλέγεται δὲ πρὸ τοῦ θερισμοῦ τῶν κριθῶν, ἐγγλωρότερα δὲ μᾶλλον. καθαίρει δὲ κάτω.

[5] Ἐτέρα δὲ μήκων Ἡρακλεία καλεῖται τὸ μὲν φύλλον ἔχουσα οἶον στρουθός, ᾧ τὰ ὀθόνια λευκαίνουσι, ῥίζαν δὲ λεπτήν ἐπιπόλαιον, τὸν δὲ καρπὸν λευκόν. ταύτης ἡ ῥίζα καθαίρει ἄνω· χρῶνται δὲ τινες πρὸς τοὺς ἐπιλήπτους ἐν μελικράτῳ. ταῦτα μὲν οὖν ὥσπερ ὁμωνυμία τινὶ συνείληπται.

[13.1] Τῶν δὲ ῥιζῶν καὶ ἐν τοῖς χυμοῖς αἱ διαφοραὶ καὶ ἐν ταῖς ὁσμαῖς· αἱ μὲν γάρ εἰσι δριμεῖαι αἱ δὲ πικραὶ αἱ δὲ γλυκεῖαι, καὶ αἱ μὲν εὐοδοὶ αἱ δὲ βαρεῖαι. γλυκεῖα μὲν ἢ τε νυμφαία καλουμένη· φύεται δ' ἐν ταῖς λίμναις καὶ ἐν τοῖς ἐλώδεσιν, οἶον ἔν τε τῇ Ὀρχομενίᾳ καὶ Μαραθῶνι καὶ περὶ Κρήτην· καλοῦσι δ' αὐτὴν οἱ Βοιωτοὶ μαδωνάιν καὶ τὸν καρπὸν ἐσθίουσιν. ἔχει δὲ τὸ φύλλον μέγα ἐπὶ τοῦ ὕδατος· εἶναι δὲ φασιν ἰσχυαίμον, ἐὰν τρίψας τις ἐπὶ τὴν πληγὴν ἐπιθῇ· χρησίμη δὲ καὶ πρὸς δυσεντερίαν πινομένη.

[2] Γλυκεῖα δὲ καὶ ἡ Σκυθική· καὶ ἔνιοι δὲ καλοῦσιν εὐθὺς γλυκεῖαν αὐτήν· γίνεται δὲ περὶ τὴν Μαιῶτιν· χρησίμη δὲ πρὸς τε τὰ ἄσθματα καὶ πρὸς τὴν βήχα ξηρὰν καὶ ὅλως τοὺς περὶ τὸν θώρακα πόνους· ἔτι δὲ πρὸς τὰ ἔλκη ἐν μέλιτι· δύναται δὲ καὶ τὴν δίψαν παύειν, ἐὰν τις ἐν τῷ στόματι ἔχῃ· δι' ὃ ταύτῃ τε καὶ τῇ ἱππακῇ διάγειν φασὶ τοὺς Σκύθας ἡμέρας καὶ ἔνδεκα καὶ δώδεκα.

[3] [Η δὲ ἀριστολογία τῇ ὁσφρήσει μὲν εὐοδμος τῇ δὲ γεύσει πικρὰ σφόδρα τῇ χροίᾳ δὲ μέλαινα. φύεται δὲ ἐν τοῖς ὄρεσιν ἢ βελτίστη· φύλλον δὲ ἔχει προσεμφερές τῇ ἀλσίῃ πλην στρογγυλότερον· χρησίμη δὲ πρὸς πολλὰ, καὶ ἀρίστη πρὸς κεφαλῆς ἀγαθὴ δὲ καὶ πρὸς τὰ ἄλλα ἔλκη, καὶ πρὸς τὰ ἐρπετὰ καὶ πρὸς ὕπνον καὶ πρὸς ὑστέρα. τὰ μὲν οὖν προσάγειν κελεύουσιν ἐν ὕδατι ἀναδεύσαντα καὶ καταπλάττοντα, τὰ δὲ ἄλλα εἰς μέλι ἐνξύσαντα καὶ ἔλαιον· πρὸς δὲ τὰ τῶν ἐρπετῶν ἐν οἴνῳ ὀξίνῃ πίνειν καὶ ἐπὶ τὸ δῆγμα ἐπιπλάττειν· εἰς ὕπνον δὲ ἐν οἴνῳ μέλανι αὐστηρῶς κνίσαι· ἐὰν δὲ αἱ μῆτραι προπέσωσι, τῷ

ὑδατι ἀποκλύζειν.]

[4] Αὗται μὲν οὖν γλυκεῖαι. ἄλλαι δὲ πικραί, αἱ δὲ βαρεῖαι τῇ γεύσει. γίνονται δὲ τινες τῶν γλυκειῶν αἱ μὲν ἐκστατικάι, καθάπερ ἡ ὁμοία τῷ σκολύμφῳ περὶ Τέγεαν, ἣν καὶ Πάνδειος ὁ ἀνδριαντοποιὸς φαγὼν ἐργαζόμενος ἐν τῷ ἱερῷ ἐξέστη. αἱ δὲ θανατηφόροι, καθάπερ ἡ περὶ τὰ μέταλλα ἐν τοῖς ἔργοις τοῖς ἐν Θράκῃ· κούφη δὲ καὶ ἡδεῖα πάνυ τῇ γεύσει καὶ τὸν θάνατον ὑπνώδῃ τινὰ ποιοῦσα καὶ ἐλαφρόν. ἔχουσι δὲ καὶ τοῖς χρώμασι διαφορὰς οὐ τῷ λευκῷ καὶ μέλανι καὶ ξανθῷ μόνον, ἀλλ' ἔνιαι καὶ οἰνοχρῶτες, αἱ δ' ἐρυθραί, καθάπερ ἡ τοῦ ἐρευθεδανοῦ.

[5] Ἡ δὲ τοῦ πενταφύλλου ἡ πενταπετοῦς, καλοῦσι γὰρ ἀμφοτέρως, ὀρυττομένη ἐρυθρὰ ξηραينوμένη δὲ μέλαινα γίνεται καὶ τετράγωνος· ἔχει δὲ τὸ φύλλον ὥσπερ οἶναρον μικρὸν δὲ καὶ τὴν χροιάν ὅμοιον· καὶ αὐξάνεται καὶ φθίνει ἅμα τῇ ἀμπέλῳ· πάντα δὲ πέντε τὰ φύλλα, δι' ὃ καὶ ἡ προσηγορία· καυλοὺς δὲ ἐπὶ γῆν ἴησι λεπτοὺς καὶ κνήμας ἔχει.

[6] Τὸ δὲ ἐρευθεδανὸν φύλλον ὅμοιον κιττῷ πλην στρογγυλότερον· φύεται δ' ἐπὶ γῆς ὥσπερ ἄγρωσις, φιλεῖ δὲ παλίσκια χωρία. οὐρητικὴ δέ, δι' ὃ καὶ χρῶνται πρὸς τὰ τῆς ὀσφύος ἀλγήματα καὶ πρὸς τὰς ἰσχιάδας.

Ἐνιαι δὲ ἰδιόμορφοί τινες, ὥσπερ ἡ τε τοῦ σκορπίου καλουμένου καὶ ἡ τοῦ πολυποδίου. ἡ μὲν γὰρ ὁμοία σκορπίῳ καὶ χρησίμη δὲ πρὸς τὴν πληγὴν αὐτοῦ καὶ πρὸς ἄλλ' ἅττα. ἡ δὲ τοῦ πολυποδίου δασεῖα καὶ ἔχουσα κοτυληδόνας, ὥσπερ αἱ τοῦ πολυπόδος πλεκτάναι. καθαίρει δὲ κάτω· κἂν περιάψηται τις οὐ φασιν ἐμφύεσθαι πολύπουν. ἔχει δὲ φύλλον ὅμοιον τῇ πτερίδι τῇ μεγάλῃ καὶ φύεται ἐν ταῖς πέτραις.

[14.1] Πασῶν δὲ τῶν ῥιζῶν αἱ μὲν πλείω χρόνον αἱ δὲ ἐλάττω διαμένουσιν. ὁ μὲν γὰρ ἐλλέβορος καὶ τριάκοντα ἔτη χρήσιμος, ἡ δὲ ἀριστολογία πέντε ἢ ἕξ, χαμαιλέον δὲ ὁ μέλας τετταράκοντα, κενταυρίς δὲ δέκα ἢ δώδεκα· πείρα δὲ ἡ ῥίζα καὶ πυκνὴ· πευκέδανον δὲ πέντε ἢ ἕξ, ἀμπέλου δὲ ἀγρίας ἐνιαυτόν, ἐὰν ἐν σκιᾷ ᾗ καὶ ἄπληκτος, εἰ δὲ μὴ, σαπρὰ καὶ σομφώδης· ἄλλαι δὲ ἄλλους ἔχουσαι χρόνους. πάντων δὲ ὅλως τῶν φαρμάκων πλεῖστον διαμένει χρόνον τὸ ἐλατήριον, καὶ τὸ παλαιότατον ἄριστον. ἱατρὸς δ' οὖν τις ἔλεγεν οὐκ ἀλαζῶν οὐδὲ ψεύστης ὡς εἴη παρ' αὐτῷ καὶ διακοσίῳ ἐτῶν θαυμαστὸν δὲ τῇ

[2] ἀρετῇ, δοῦναι δὲ αὐτῷ τινα δῶρον. αἰτία δὲ τῆς χρονιότητος ἡ ὑγρότης· διὰ γὰρ ταύτην καὶ ὅταν κόψωσι τιθέασι εἰς τέφραν ὑγρόν, καὶ οὐδ' ὥς γίνεται ξηρόν, ἀλλ' ἄχρι πεντήκοντα ἐτῶν σβέννυσι προσαγόμενον τοὺς λύχνους. φασὶ δὲ μόνον ἡ μάλιστα ὑπέρινον ἄνω ποιεῖν τῶν φαρμάκων· αὕτη μὲν οὖν

ιδιότης τις δυνάμεως.

[3] Τῶν δὲ ῥίζων ὅσαι μὲν γλυκύτητά τινα ἔχουσι ξυμβαίνειν θριπηδέστους γίνεσθαι χρονιζομένας, ὅσαι δὲ δριμεῖαι, τοῦτο μὲν μὴ πάσχειν ἀμαυροῦσθαι δ' αὐτῶν τὰς δυνάμεις μανουμένων καὶ κενουμένων. τῶν δ' ἔξω θηρίων ἄλλο μὲν οὐδὲν ἄπτεται ῥίζης δριμείας, ἡ δὲ σφονδύλη πασῶν· τοῦτο μὲν οὖν ἴδιον τῆς τοῦ ζώου φύσεως.

[4] Πᾶσαν δὲ χεῖρω γίνεσθαι ῥίζαν, ἐὰν ἐάσῃ τις τελειωθῆναι καὶ ἀδρυνθῆναι τὸν καρπὸν· ὡσαύτως δὲ καὶ τὸν καρπὸν, ἐὰν ὀπίσης τὴν ῥίζαν· ὥς ἐπὶ τὸ πολὺ δὲ αἱ φαρμακῶδεις οὐκ ὀπίζονται, ὧν δ' ἂν τὰ σπέρματα φαρμακῶδη, αὗται δὴ ὀπίζονται· χρῆσθαι δὲ τινὲς φασὶ μᾶλλον ταῖς ῥίζαις, ὅτι ἰσχυρότερος ὁ καρπὸς ὥσθ' ὑπενεγκεῖν τὸ σῶμα. φαίνεται δὲ οὐ καθ' ὅλου τοῦτο ἀληθές· ἐπεὶ καὶ οἱ ἐν Ἀντικύρᾳ τοῦ σησαμώδους [ἐλλεβόρου] διδόασιν, [ὅτι ὁ καρπὸς ὁμοῖος σησάμῳ].

[15.1] Φαρμακῶδεις δὲ δοκοῦσιν εἶναι τόποι μάλιστα τῶν μὲν ἔξω τῆς Ἑλλάδος οἱ περὶ τὴν Τυρρηνίαν καὶ τὴν Λατίνην, ἐν ἧ καὶ τὴν Κίρκην εἶναι λέγουσιν· καὶ ἔτι μᾶλλον γε, ὥς Ὅμηρός φησι, τὰ περὶ Αἴγυπτον· ἐκεῖθεν γὰρ τὴν Ἑλένην φησὶ λαβεῖν “ἐσθλὰ τὰ οἱ Πολύδαμνα πόρεν Ὠῶνος παράκοιτις Αἰγυπτίῃ· τόθι πλεῖστα φύει ζεῖδωρος ἄρουρα φάρμακα, πολλὰ μὲν ἐσθλὰ τετυγμένα πολλὰ δὲ λυγρά.” ὧν δὴ καὶ τὸ νηπενθὲς ἐκεῖνό φησιν εἶναι καὶ ἄχολον, ὥστε λήθην ποιεῖν καὶ ἀπάθειαν τῶν κακῶν. καὶ σχεδὸν αὗται μὲν εὐοίκασιν ὥσπερ ὑπὸ τῶν ποιητῶν ὑποδεδειχθαι. καὶ γὰρ Αἰσχύλος ἐν ταῖς ἐλεγείαις ὥς πολυφάρμακον λέγει τὴν Τυρρηνίαν· “Τυρρηνὸν γενεάν, φαρμακοποιὸν ἔθνος.”

[2] Οἱ δὲ τόποι πάντες πῶς φαίνονται μετέχειν τῶν φαρμάκων, ἀλλὰ τῷ μᾶλλον καὶ ἥττον διαφέρειν· καὶ γὰρ οἱ πρὸς ἄρκτον καὶ μεσημβρίαν καὶ οἱ πρὸς ἀνατολὰς ἔχουσι θαυμαστὰς δυνάμεις. ἐν Αἰθιοπία γὰρ ἡ τοὺς οἰστοὺς χρίουσι ῥίζα τίς ἐστι θανατηφόρος. ἐν δὲ Σκύθαις αὕτη τε καὶ ἕτεραι πλείους, αἱ μὲν παραχρῆμα ἀπαλλάττουσαι τοὺς προσενεγκαμένους, αἱ δ' ἐν χρόνοις αἱ μὲν ἐλάττουσιν αἱ δ' ἐν πλείουσιν, ὥστ' ἐνίοις καταφθίνειν. ἐν Ἰνδοῖς δὲ καὶ ἕτερα γένη πλείω, περιττότατα δέ, εἴπερ ἀληθῆ λέγουσιν, ἡ τε δυναμένη τὸ αἷμα διαχεῖν καὶ οἶον ὑποφεύγειν, καὶ πάλιν ἡ συνάγουσα καὶ πρὸς ἑαυτὴν ἐπισπωμένη, ἧ δὴ φασιν εὐρῆσθαι πρὸς τὰ τῶν ὀφιδίων τῶν θανατηφόρων δήγματα.

[3] Περί δὲ τὴν Θράκην εἶναι μὲν καὶ ἐτέρας οὐκ ὀλίγας, ἰσχυροτάτην δὲ ὥς εἰπεῖν τὴν Ἰσχαιμον, ἣν δὴ λέγουσιν οἱ μὲν κεντηθείσης τῆς φλεβὸς οἱ δὲ καὶ

σφοδρότερος διατηρηθείσης ἴσχειν καὶ κωλύειν τὴν χύσιν. [ταῦτα μὲν οὖν, ὥσπερ εἶπομεν, ἔοικε δηλοῦν τὸ κοινόν.] τῶν μὲν οὖν ἔξω τόπων οἱ φαρμακωδέστατοι οὗτοι.

[4] Τῶν δὲ περὶ τὴν Ἑλλάδα τόπων φαρμακωδέστατον τὸ τε Πήλιον τὸ ἐν Θετταλία καὶ τὸ Τελέθριον τὸ ἐν Εὐβοίᾳ καὶ ὁ Παρνασός, ἔτι δὲ καὶ ἡ Ἀρκαδία καὶ ἡ Λακωνική· καὶ γὰρ αὗται φαρμακώδεις ἀμφοτέραι· δι' ὃ καὶ οἱ γε Ἀρκάδες εἰώθασιν ἀντὶ τοῦ φαρμακοποιεῖν γαλακτοποιεῖν περὶ τὸ ἔαρ, ὅταν οἱ ὅποί μάλιστα τῶν τοιούτων φύλλων ἀκμάζωσι· τότε γὰρ φαρμακωδέστατον τὸ γάλα· πίνουνσι δὲ βόειον· δοκεῖ γὰρ πολυνομώτατον καὶ παμπαγώτατον εἶναι πάντων ὁ βοῦς.

[5] Φύεται δὲ παρ' αὐτοῖς ὁ τε ἐλλέβορος ἀμφοτέρος καὶ ὁ λευκὸς καὶ ὁ μέλας· ἔτι δὲ δαῦκον δαφνοειδὲς κροκόεν, καὶ ἦν ἐκεῖνοι μὲν ράφανον ἀγρίαν καλοῦσι τῶν δ' ἱατρῶν τινες κεράϊν, καὶ ἦν οἱ μὲν ἀλθαίαν ἐκεῖνοι δὲ μαλάχην ἀγρίαν, καὶ ἡ ἀριστολογία καὶ τὸ σέσελι καὶ τὸ ἵπποσέλινον καὶ τὸ πευκέδανον καὶ ἡ Ἡράκλεια καὶ ὁ στρύχνος ἀμφοτέρος ὁ τε φοινικεὺς ἔχων τὸν καρπὸν καὶ ὁ μέλανα.

[6] Φύεται δὲ καὶ ὁ σίκυος ὁ ἄγριος, ἐξ οὗ τὸ ἐλατήριον συντίθεται· καὶ ὁ τιθύμαλλος, ἐξ οὗ τὸ ἵπποφάεος· ἄριστον δὲ τοῦτο περὶ Τεγέαν κάκεῖνο μάλιστα σπουδάζεται· φύεται δ' ἐκεῖ ἐπὶ πλεόν· πλείστον δὲ καὶ κάλλιστον φύεται περὶ τὴν Κλειτορίαν.

[7] Ἡ δὲ πανάκεια γίνεται κατὰ τὸ πετραῖον περὶ Ψωφίδα καὶ πλείστη καὶ ἀρίστη. τὸ δὲ μῶλυ περὶ Φενεὸν καὶ ἐν τῇ Κυλλήνῃ. φασὶ δ' εἶναι καὶ ὅμοιον ᾧ ὁ Ὅμηρος εἴρηκε, τὴν μὲν ρίζαν ἔχον στρογγύλην προσεμφερῇ κρομύῳ τὸ δὲ φύλλον ὅμοιον σκίλλῃ· χρῆσθαι δὲ αὐτῷ πρὸς τε τὰ ἀλεξιφάρμακα καὶ τὰς μαγείας· οὐ μὴν ὀρύττειν γ' εἶναι χαλεπὸν, ὥς Ὅμηρός φησι.

[8] Τὸ δὲ κώνειον ἄριστον περὶ Σοῦσα καὶ ἐν τοῖς ψυχροτάτοις τόποις. γίνεται δὲ καὶ ἐν τῇ Λακωνικῇ τὰ πολλὰ τούτων· καὶ γὰρ αὕτη πολυφάρμακος. ἐν Ἀχαΐᾳ δὲ ἡ τε τραγάκανθα πολλὴ καὶ οὐδὲν χείρων ὥς οἴονται τῆς Κρητικῆς ἀλλὰ καὶ τῇ ὄψει καλλίων· καὶ δαῦκον περὶ τὴν Πατραϊκὴν διαφέρον· τοῦτο δὲ θερμαντικὸν φύσει, ρίζαν δὲ ἔχει μέλαιναν. φύεται δὲ τὰ πολλὰ τούτων καὶ ἐν τῷ Παρνασῷ καὶ περὶ τὸ Τελέθριον. καὶ ταῦτα μὲν κοινὰ πλειόνων χώρων.

[16.1] Τὸ δὲ δίκταμνον ἴδιον τῆς Κρήτης, θαυμαστὸν δὲ τῇ δυνάμει καὶ πρὸς πλείω χρήσιμον μάλιστα δὲ πρὸς τοὺς τόκους τῶν γυναικῶν. ἔστι δὲ τὸ μὲν φύλλον παρόμοιον τῇ βληχοῖ, ἔχει δέ τι καὶ κατὰ τὸν χυλὸν ἐμπερὲς τὰ δὲ

κλωνία λεπτότερα. χρώνται δὲ τοῖς φύλλοις, οὐ τοῖς κλωσίν οὐδὲ τῷ καρπῷ· χρησίμον δὲ πρὸς πολλὰ μὲν καὶ ἄλλα, μάλιστα δέ, ὥσπερ ἐλέχθη, πρὸς τὰς δυστοκίας τῶν γυναικῶν· ἡ γὰρ εὐτοκεῖν φασὶ ποιεῖν ἢ παύειν γε τοὺς πόνους ὁμολογουμένως· δίδεται δὲ πίνειν ἐν ὕδατι. σπάνιον δὲ ἐστὶ· καὶ γὰρ ὀλίγος ὁ τόπος ὁ φέρων, καὶ τοῦτον αἱ αἴγες ἐκνέμονται διὰ τὸ φιληδεῖν. ἀληθὲς δὲ φασὶν εἶναι καὶ τὸ περὶ τῶν βελῶν, ὅτι φαγούσαις ὅταν τοξευθῶσι ἐκβάλλει. τὸ μὲν οὖν δίκταμνον τοιοῦτόν τε καὶ τοιαύτας ἔχει τὰς δυνάμεις.

[2] Τὸ δὲ ψευδοδίκταμνον τῷ μὲν φύλλῳ ὅμοιον τοῖς κλωνίοις δ' ἔλαττον τῇ δυνάμει δὲ πολὺ λειπόμενον. βοηθεῖ μὲν γὰρ καὶ ταῦτά, χειρὸν δὲ πολλῶ καὶ ἀσθενέστερον. ἔστι δὲ εὐθὺς ἐν τῷ στόματι φανερὰ τοῦ δικτάμνου ἡ δύναμις· διαθερμαίνει γὰρ ἀπὸ μικροῦ σφόδρα. τιθέασι δὲ τὰς δεσμίδας ἐν νάρθηκι ἢ καλάμῳ πρὸς τὸ μὴ ἀποπνεῖν· ἀσθενέστερον γὰρ ἀποπνεῦσαν. λέγουσι δὲ τινες ὡς ἡ μὲν φύσις μία ἢ τοῦ δικτάμνου καὶ ἡ τοῦ ψευδοδικτάμνου, διὰ δὲ τὸ ἐν εὐγειοτέροις φύεσθαι τόποις χειρὸν γίνεσθαι, καθάπερ καὶ ἄλλα πολλὰ πλείω τούτων κατὰ τὰς δυνάμεις. τὸ γὰρ δίκταμνον φιλεῖ χῶραν τραχεῖαν.

[3] Ἔστι δὲ καὶ ἕτερον δίκταμνον ὥσπερ ὁμώνυμον, οὔτε τὴν ὄψιν οὔτε τὴν δύναν μιν ἔχον τὴν αὐτὴν· φύλλον γὰρ ἔχει ὅμοιον σισυμβρίῳ τοὺς δὲ κλῶνας μείζους· ἔτι δὲ τὴν χρεῖαν καὶ τὴν δύναν μιν οὐκ ἐν τοῖς αὐτοῖς. τοῦτο μὲν οὖν, ὥσπερ ἐλέχθη, θαυμαστὸν ἅμα καὶ ἴδιον τῆς νήσου. φασὶ δὲ τινες ὅλως τῶν φύλλων καὶ τῶν ὀροδάμνων καὶ ἀπλῶς τῶν ὑπὲρ γῆς τὰ ἐν Κρήτῃ διαφέρειν, τῶν δὲ ἄλλων τῶν γε πλείστων τὰ ἐν τῷ Παρνασῶ.

[4] Τὸ δ' ἀκόνιτον γίνεται μὲν καὶ ἐν Κρήτῃ καὶ ἐν Ζακύνθῳ, πλείστον δὲ καὶ ἄριστον ἐν Ἡρακλείᾳ τῇ ἐν Πόντῳ. ἔχει δὲ φύλλον μὲν κιχοριῶδες, ρίζαν δὲ ὁμοίαν τῷ σχήματι καὶ τῷ χρώματι καρίδι, τὴν δὲ δύναν μιν τὴν θανατηφόρον ἐν ταύτῃ· τὸ δὲ φύλλον καὶ τὸν καρπὸν οὐθέν φασὶ ποιεῖν· καρπὸς δὲ ἐστὶ πόας οὐχ ὑλήματος. βραχεῖα δὲ ἡ πόα καὶ οὐδὲν ἔχουσα περιττόν, ἀλλὰ παρομοία τῷ σίτῳ τὸ δὲ σπέρμα οὐ σταχυηρόν. φύεται δὲ πανταχοῦ καὶ οὐκ ἐν ταῖς Ἀκόναις μόνον, ἀφ' ὧν ἔχει τὴν προσηγορίαν· αὕτη δὲ ἐστὶ κώμη τις τῶν Μαρνανδυνῶν· φιλεῖ δὲ μάλιστα τοὺς πετρώδεις τόπους· οὐ νέμεται δὲ οὔτε πρόβατον οὔτ' ἄλλο [5] ζῶον οὐδέν. συντίθεσθαι δὲ τρόπον τινὰ πρὸς τὸ ἐργάζεσθαι καὶ οὐ παντὸς εἶναι· δι' ὃ καὶ τοὺς ἰατροὺς οὐκ ἐπισταμένους συντίθεναι σηπτικῶ τε χρῆσθαι καὶ πρὸς ἄλλα ἅττα· πινόμενον δ' οὐδεμίαν αἴσθησιν ποιεῖν οὔτ' ἐν οἴνῳ οὔτ' ἐν μελικράτῳ· συντίθεσθαι δὲ ὥστε κατὰ χρόνους τακτοὺς ἀναιρεῖν, οἷον δίμηνον τρίμηνον ἐξάμηνον

ἐνιαυτόν, τοὺς δὲ καὶ δύο ἔτη· χεῖριστα δὲ ἀπαλλάττειν τοὺς ἐν πλείστω χρόνῳ καταφθίνοντος τοῦ σώματος, ῥᾶστα δὲ τοὺς παραχρῆμα. λυτικὸν δὲ φάρμακον οὐχ εὐρῆσθαι, καθάπερ ἀκούομεν ἐτέρων τι φύεσθαι. ἀλλὰ τοὺς ἐγχωρίους ἀνασώζειν τινὰς μέλιτι καὶ οἴνῳ καὶ τοιούτοις τισί, σπανίως δὲ καὶ τούτους καὶ ἐργωδῶς.

[6] Ἀλλὰ τοῦ ἐφημέρου τὸ φάρμακον εὐρῆσθαι· ἕτερον γάρ τι ρίζιον εἶναι ὁ ἐφήμερον ἀπαλλάττει· τοῦτο δὲ φύλλον ὅμοιον ἔχειν τῷ ἐλλεβόρῳ ἢ τῷ λειρίῳ· καὶ τοῦτο πάντας εἰδέναι· δι' ὃ καὶ τὰ ἀνδράποδά φασι πολλάκις παροργισθέντα χρῆσθαι, κᾶπειτα ἰατρεύειν αὐτὰ πρὸς τοῦτο ὀρμῶντα, καὶ γὰρ οὐδὲ ταχεῖαν ποιεῖσθαι τὴν ἀπαλλαγὴν οὐδὲ ἐλαφρὰν ἀλλὰ δυσχερῇ καὶ χρόνιον· εἰ μὴ ἄρα διὰ τὸ εὐθεράπευτον εἶναι καὶ ἀκατασκεύαστον ὥς δεῖ. φασὶ γοῦν καὶ παραχρῆμα ἀπαλλάττεσθαι καὶ ὕστερον χρόνῳ τοὺς δὲ καὶ εἰς ἐνιαυτὸν ἄγειν, καὶ τὰς δόσεις ἀβοηθήτους εἶναι. ταῦτα δὲ ἐξακριβωθῆναι μάλιστα παρὰ τοῖς Τυρρηνοῖς [7] τοῖς ἐν Ἡρακλείᾳ. τοῦτο μὲν «οὔν» οὐδὲν ἄτοπον, εἰ τρόπον μὲν τινα ἀβοήθητον ἄλλως δὲ βοηθήσιμον, ὥσπερ καὶ ἕτερα τῶν θανατηφόρων.

Τὸ δὲ ἀκόνιτον ἄχρηστον, ὥσπερ εἴρηται, τοῖς μὴ ἐπισταμένοις· οὐδὲ κεκτῆσθαι δὲ ἐξεῖναι, ἀλλὰ θάνατον τὴν ζημίαν· τὴν δὲ τῶν χρόνων διαφορὰν ἀκολουθεῖν κατὰ τὰς συλλογὰς· ἰσοχρόνους γὰρ τοὺς θανάτους γίνεσθαι τοῖς ἀπὸ τῆς συλλογῆς χρόνοις.

[8] Θρασύας δ' ὁ Μαντινεὺς εὐρήκει τι τοιοῦτον, ὥσπερ ἔλεγεν, ὥστε ῥαδίαν ποιεῖν καὶ ἄπονον τὴν ἀπόλυσιν τοῖς ὁποῖς χρώμενος κωνεῖου τε καὶ μήκωνος καὶ ἐτέρων τοιούτων, ὥστε εὖογκον εἶναι σφόδρα καὶ μικρὸν ὅσον εἰς δραχμῆς ὀλκήν. ἀβοήθητον δὲ πάντα καὶ δυνάμενον διαμένειν ὀποσονοῦν χρόνον καὶ οὐδὲν ἀλλοιούμενον. ἐλάμβανε δὲ τὸ κώνειον οὐχ ὅθεν ἐτύγγανεν ἀλλ' ἐκ Σούσων καὶ εἴ τις ἄλλος τόπος ψυχρὸς καὶ παλίσκιος· ὥσαύτως δὲ καὶ τᾶλλα. συνετίθει δὲ καὶ ἕτερα φάρμακα πολλὰ καὶ ἐκ πολλῶν. δεινὸς δὲ καὶ Ἀλεξίας ὁ μαθητὴς αὐτοῦ καὶ οὐχ ἥττον ἔντεχνος ἐκείνου· καὶ γὰρ τῆς ἄλλης ἱατρικῆς ἔμπειρος.

[9] Ταῦτα μὲν οὔν εὐρῆσθαι δοκεῖ πολλῷ μᾶλλον νῦν ἢ πρότερον. ὅτι δὲ διαφέρει τὸ χρῆσθαι πῶς ἐκάστῳ φανερόν ἐκ πολλῶν· ἐπεὶ καὶ Κεῖοι τῷ κωνεῖῳ πρότερον οὐχ οὕτω ἀλλὰ τρίβοντες ἐχρῶντο, καθάπερ οἱ ἄλλοι· νῦν δ' οὐδ' ἂν εἷς τρίψειεν, ἀλλὰ περιπτίσαντες καὶ ἀφελόντες τὸ κέλυφος, τοῦτο γὰρ τὸ τὴν δυσχέρειαν παρέχον δυσκατέργαστον ὄν, μετὰ ταῦτα κόπτουσιν ἐν τῷ ὀλμῳ καὶ διαττήσαντες λεπτὰ ἐπιπάττοντες ἐφ' ὕδωρ πίνουσιν, ὥστε

ταχείαν καὶ ἐλαφρὰν γίνεσθαι τὴν ἀπαλλαγὴν.

[17.1] Ἀπάντων δὲ τῶν φαρμάκων αἱ δυνάμεις ἀσθενέστεραι τοῖς συνειθισμένοις τοῖς δὲ καὶ ἀνενεργεῖς τὸ ὅλον. ἔνιοι γὰρ ἐλλέβορον ἐσθίοντες πολὺν ὥστε ἀναλίσκειν δέσμας ὅλας οὐδὲν ἀσχοῦσιν· ὅπερ ἐποίει καὶ Θρασύας δεινότατος ὢν ὡς ἐδόκει περὶ τὰς ρίζας. ποιοῦσι δὲ τοῦθ' ὡς ἔοικε καὶ τῶν νομέων τινές· δι' ὃ καὶ πρὸς τὸν φαρμακοπώλην τὸν θαυμαζόμενον ὡς κατήσθιε ρίζαν μίαν ἢ δύο παραγενόμενος ὁ ποιμὴν καὶ ἀναλώσας ὅλην τὴν δέσμην ἐποίησεν ἀδόκιμον· ἐλέγετο δ' ὅτι καθ' ἐκάστην ἡμέραν τοῦτο ποιεῖ καὶ αὐτὸς καὶ ἕτεροι.

[2] Κινδυνεύει γὰρ ἔνια τῶν φαρμάκων τῇ ἀσυνηθείᾳ φάρμακα γίνεσθαι, τάχα δὲ ἀληθέστερον εἰπεῖν ὡς τῇ συνηθείᾳ οὐ φάρμακα· προσδεξαμένης γὰρ τῆς φύσεως καὶ κατακρατούσης οὐκέτι φάρμακα, καθάπερ καὶ Θρασύας ἔλεγεν· ἐκεῖνος γὰρ ἔφη τὸ αὐτὸ τοῖς μὲν φάρμακον εἶναι τοῖς δ' οὐ φάρμακον, διαιρῶν τὰς φύσεις ἐκάστων· ὤτετο γὰρ δεῖν καὶ ἦν δεινὸς διαγνῶναι. ποιεῖ δὲ τι δῆλον ὅτι πρὸς τῇ φύσει καὶ τὸ ἔθος. Εὐδημος γοῦν ὁ φαρμακοπώλης εὐδοκιμῶν σφόδρα κατὰ τὴν τέχνην συνθέμενος μηδὲν πείσεσθαι πρὸ ἡλίου δύναντος κατέφαγε μέτριον πάνυ καὶ οὐ [3] κατέσχευεν οὐδ' ἐκράτησεν. ὁ δὲ Χῖος Εὐδημος πίνων ἐλλέβορον οὐκ ἐκαθαίρετο. καὶ ποτε ἔφη πιεῖν ἐν μιᾷ ἡμέρᾳ δύο καὶ εἴκοσι πόσεις ἐν τῇ ἀγορᾷ καθήμενος ἐπὶ τῶν σκευῶν καὶ οὐκ ἐξαναστῆναι πρὸ τοῦ δειλὴν γενέσθαι· τότε δ' ἐλθὼν καὶ λούσασθαι καὶ δειπνεῖν ὥσπερ εἰώθει καὶ οὐκ ἐξεμέσαι· πλὴν οὗτός γε βοήθειάν τινα παρασκευασάμενος κατέσχε· κίσσηριν γὰρ ἐπιπάττων ἐπ' ὄξος δριμύ πιεῖν ἔφη μετὰ τὴν ἐβδόμην πόσιν, καὶ πάλιν ὕστερον ἐν οἴνῳ τὸν αὐτὸν τρόπον· τὴν δὲ τῆς κισσήριδος οὕτως ἰσχυρὰν εἶναι δύναμιν ὥστ' ἐάν τις εἰς πίθον ζέοντα «οἶνου» ἐμβάλλῃ παύειν τὴν ζέσιν οὐ παραχρῆμα μόνον ἀλλὰ καὶ ὅλως καταξηραίνουσάν τε δῆλον ὅτι καὶ ἀναδεχομένην τὸ πνεῦμα καὶ τοῦτο διῆϊσαν. οὗτος μὲν οὖν τό γε πλῆθος ταύτῃ τῇ βοηθείᾳ κατέσχευεν.

[4] Ὅτι δὲ καὶ τὸ ἔθος ἰσχυρὸν φανερὸν ἐκ πολλῶν· ἐπεὶ καὶ τὸ ἀψίνθιον τὰ μὲν ἐνταῦθα πρόβατα οὐ φασὶν τινες νέμεσθαι, τὰ δ' ἐν τῷ Πόντῳ νέμεται καὶ γίνεται πióτερα καὶ καλλίω καί, ὡς δὴ τινες λέγουσιν, οὐκ ἔχοντα χολήν. ἀλλὰ γὰρ ταῦτα μὲν ἑτέρας ἂν τινος εἴη θεωρίας.

[18.1] Αἱ δὲ ρίζαι καὶ τὰ ὑλήματα, καθάπερ εἴρηται, πολλὰς ἔχουσι δυνάμεις οὐ πρὸς τὰ ἐμψυχα σώματα μόνον ἀλλὰ καὶ πρὸς τὰ ἄψυχα. λέγουσι γὰρ ἄκανθάν τινα εἶναι ἢ πῆγνυσι τὸ ὕδωρ ἐμβαλλομένη· πηγνύναι δὲ καὶ τὴν τῆς ἀλθαίας ρίζαν, ἐάν τις τρίψας ἐμβάλλῃ καὶ θῇ ὑπαίθριον· ἔχει δὲ ἡ ἀλθαία

φύλλον μὲν ὅμοιον τῇ μαλάχῃ πλὴν μεῖζον καὶ δασύτερον, τοὺς δὲ καυλοὺς μαλακοὺς, ἄνθος δὲ μήλινον, καρπὸν δ' ὅμοιον τῇ μαλάχῃ, ῥίζαν δὲ ἰνώδη λευκὴν τῇ γεύσει δὲ ὥσπερ τῆς μαλάχης ὁ καυλός· χρῶνται δὲ αὐτῇ πρὸς τε τὰ ῥήγματα καὶ τὰς βῆχας ἐν οἴνῳ γλυκεῖ καὶ ἐπὶ τὰ ἔλκη ἐν ἐλαίῳ.

[2] Ἐτέραν δὲ τινα συνευνομένην τοῖς κρέασι συνάπτειν εἰς ταῦτο καὶ οἶον πηγνύναι· τὰς δὲ καὶ ἔλκειν, ὥσπερ ἡ λίθος καὶ τὸ ἤλεκτρον. καὶ ταῦτα μὲν ἐν τοῖς ἀψύχοις.

Τὸ δὲ θηλύφονον, οἱ δὲ σκορπίον καλοῦσι διὰ τὸ τὴν ῥίζαν ὁμοίαν ἔχειν τῷ σκορπίῳ, ἐπιζυόμενον ἀποκτείνει τὸν σκορπίον· ἐὰν δὲ τις ἐλλέβορον λευκὸν καταπάσῃ, πάλιν ἀνίστασθαι φασιν· ἀπόλλυσι δὲ καὶ βοῦς καὶ πρόβατα καὶ ὑποζύγια καὶ ἀπλῶς πᾶν τετράπουν ἐὰν εἰς τὰ αἰδοῖα τεθῇ ἡ ῥίζα ἢ τὰ φύλλα αὐθήμερον· χρήσιμον δὲ πρὸς σκορπίου πληγὴν πινόμενον. ἔχει δὲ τὸ μὲν φύλλον ὅμοιον κυκλαμίνῳ τὴν δὲ ῥίζαν, ὥσπερ ἐλέχθη, σκορπίῳ. φύεται δὲ ὥσπερ ἡ ἄγρωστις καὶ γόνата ἔχει· φιλεῖ δὲ χωρία σκιώδη. εἰ δὲ ἀληθῆ τὰ περὶ τὸν σκορπίον ἤδη καὶ ἄλλα, οὐκ ἀπίθανα τὰ τοιαῦτα. καὶ τὰ [3] μυθώδη δὲ οὐκ ἀλόγως συγκεῖται. ἐν δὲ τοῖς ἡμετέροις σώμασι χωρὶς τῶν πρὸς ὑγείαν καὶ νόσον καὶ θάνατον καὶ πρὸς ἄλλα δυνάμεις ἔχειν φασὶν οὐ μόνον τῶν σωματικῶν ἀλλὰ καὶ τῶν τῆς ψυχῆς ...

[19.1] Πρὸς δὲ τὴν ψυχὴν τὸν μὲν στρύχον ὥστε παρακινεῖν καὶ ἐξιστάναι, καθάπερ ἐλέχθη πρότερον, ἡ δὲ τοῦ ὀνοθήρα ῥίζα δοθεῖσα ἐν οἴνῳ πρᾶότερον καὶ ἰλαρώτερον ποιεῖ τὸ ἦθος. ἔχει δὲ ὁ μὲν ὀνοθήρας τὸ μὲν φύλλον ὅμοιον ἀμυγδαλῇ μικρότερον δέ, τὸ δὲ ἄνθος ἐρυθρὸν ὥσπερ ρόδον· αὐτὸς δὲ μέγας θάμνος· ῥίζα δὲ ἐρυθρὰ καὶ μεγάλη, ὅζει δὲ ἀνανθείσης ὥσπερ οἶνου· φιλεῖ δὲ ὀρεῖνὰ χωρία. φαίνεται δὲ οὐ τοῦτο ἄτοπον· οἶον γὰρ προσφορὰ τις γίνεται δύνανται ἔχοντος οἰνώδη.

[2] Ἀλλὰ τάδε εὐηθέστερα καὶ ἀπιθανώτερα τά τε τῶν περιάπτων καὶ ὅλως τῶν ἀλεξιφαρμάκων λεγομένων τοῖς τε σώμασι καὶ ταῖς οἰκίαις. καὶ ὥς δὴ φασὶ τὸ τριπόλιον καθ' Ἡσίοδον καὶ Μουσαῖον εἰς πᾶν πρᾶγμα σπουδαῖον χρήσιμον εἶναι, δι' ὃ καὶ ὀρύττουσιν αὐτὸ νύκτωρ σκηνὴν πεζάμενοι. καὶ τὰ περὶ τῆς εὐκλείας δὲ καὶ εὐδοξίας ὁμοίως ἢ καὶ μᾶλλον· εὐκλειαν γάρ φασὶ ποιεῖν τὸ ἀντίρρινον καλούμενον· τοῦτο δ' ὁμοίον ἐστὶ τῇ ἀπαρίνῃ· ῥίζα δὲ οὐχ ὕπεστιν· ὁ δὲ καρπὸς ὥσπερ μόσχου ῥίνας ἔχει. τὸν δ' ἀπὸ [3] τούτου ἀλειφόμενον εὐδοξεῖν. εὐδοξεῖν δὲ καὶ ἐὰν τις τοῦ ἐλειοχρύσου τῷ ἄνθει στεφανῶται μύρῳ ῥαίνων ἐκ χρυσοῦ ἀπύρου. ἔχει δὲ ὁ ἐλειοχρυσὸς τὸ μὲν ἄνθος χρυσοειδές, φύλλον δὲ λευκὸν καὶ τὸν καυλὸν δὲ λεπτὸν καὶ σκληρόν

ρίζαν δὲ ἐπιπόλαιον καὶ λεπτήν. χρῶνται δὲ αὐτῷ πρὸς τὰ δακετὰ ἐν οἴνῳ καὶ πρὸς τὰ πυρίκαυστα κατακαύσαντες καὶ μίξαντες μέλιτι. τὰ μὲν οὖν τοιαῦτα, καθάπερ καὶ πρότερον ἐλέχθη, συνάξειν βουλομένων ἐστὶ τὰς ἑαυτῶν τέχνας.

[4] Αἱ δὲ τῶν ριζῶν καὶ τῶν καρπῶν καὶ τῶν ὀπῶν φύσεις ἐπεὶ πολλὰς ἔχουσι καὶ παντοίας δυνάμεις, ὅσαι ταῦτ' οὐκ ἔχονται καὶ τῶν αὐτῶν αἰτίαι, καὶ πάλιν ὅσαι τὰ ἐναντία, διαπορήσειεν ἂν τις κοινὸν ἴσως ἀπόρημα καὶ ἐφ' ἑτέρων ἀπόρων, πότερον ὅσα τῶν αὐτῶν αἰτία κατὰ μίαν τινὰ δυνάμιν ἐστίν, ἢ καὶ ἀφ' ἑτέρων ἐνδέχεται ταῦτ' οὐκ γίνεσθαι. τοῦτο μὲν οὖν ταύτῃ ἡπορήσθω· εἰ δὲ τινῶν καὶ ἄλλων τὰς φύσεις ἢ τὰς δυνάμεις ἔχομεν εἰπεῖν, ταῦτα ῥητέον.

[20.1] Τὸ δὲ πέπερι καρπὸς μὲν ἐστὶ διττὸν δὲ αὐτοῦ τὸ γένος· τὸ μὲν γὰρ στρογγύλον ὥσπερ ὄροβος, κέλυφος ἔχον καὶ σάρκα καθάπερ αἱ δαφνίδες, ὑπέρυθρον· τὸ δὲ πρόμηκες μέλαν σπερμάτια μηκωνικὰ ἔχον· ἰσχυρότερον δὲ πολὺ τοῦτο θατέρον· θερμαντικὰ δὲ ἄμφω· δι' ὃ καὶ πρὸς τὸ κώνειον βοηθεῖ ταῦτά τε καὶ ὁ λιβανωτός.

[2] Ὁ δὲ Κνίδιος κόκκος στρογγύλον ἐρυθρὸν τῇ χροίᾳ μείζον δὲ τοῦ πεπέριος ἰσχυρότερον δὲ πολὺ τῇ θερμότητι, δι' ὃ καὶ ὅταν δίδωσι κατάποτον, διδῶσι γὰρ πρὸς κοιλίας λύσιν, ἐν ἄρτῳ ἢ στέατι περιπλάττοντες· καί γὰρ ἄλλως τὸν φάρυγγα.

Θερμαντικὸν δὲ καὶ ἡ τοῦ πευκεδάνου ῥίζα, δι' ὃ καὶ ἄλειμμά τι ποιοῦσιν ἐξ αὐτῆς ἰδρωτικὸν ὥσπερ καὶ ἐξ ἄλλων. δίδεται δὲ ἡ τοῦ πευκεδάνου ῥίζα καὶ πρὸς τοὺς σπληνῆας· τὸ δὲ σπέρμα οὐ χρήσιμον οὐδὲ ὁ ὀπὸς αὐτῆς· γίνεται δὲ ἐν Ἀρκαδίᾳ.

Δαῦκον δὲ περὶ Πατραϊκὴν τῆς Ἀχαΐας διαφέρον, θερμαντικὸν φύσει· ρίζαν δὲ ἔχει μέλαιναν.

[3] Θερμαντικὸν δὲ καὶ δριμὺ καὶ τῆς ἀμπέλου τῆς ἀγρίας ῥίζα· δι' ὃ καὶ εἰς ψῖλωθρον χρήσιμον καὶ ἐφελίδιας ἀπάγειν· τῷ δὲ καρπῷ ψιλοῦσι τὰ δέρματα. τέμνεται δὲ πᾶσαν ὥραν ὀπώρας δὲ μάλιστα. Δρακοντίου δὲ ῥίζα βῆχας ἐν μέλιτι διδομένη παύειν χρησίμη. καυλὸν δὲ ἔχει ποικίλον ὀφιώδη· σπέρματι δ' οὐ χρῶνται.

Ἡ δὲ τῆς θαψίας ἐμετική· ἐὰν δὲ τις κατάσχη, καθαίρει καὶ ἄνω καὶ κάτω· δύναται δὲ καὶ τὰ πελιώματα ἐξαιρεῖν· ὑπώπια δὲ ποιεῖ ἄλλα ἐκλευκα. ὁ δὲ ὀπὸς ἰσχυρότερος αὐτῆς καθαίρει καὶ ἄνω καὶ κάτω· σπέρματι δ' οὐ χρῶνται· γίνεται δὲ καὶ ἄλλοθι μὲν ἀτὰρ καὶ ἐν τῇ Ἀττικῇ· καὶ τὰ βοσκήματα ταύτης οὐχ ἄπτεται τὰ ἐγγώρια, τὰ δὲ ξενικὰ βόσκεται καὶ διαρροία διαφθείρεται.

[4] Τὸ δὲ πολυπόδιον μετὰ τὰ ὕδατα ἀναβλαστεῖ σπέρμα δὲ οὐ φύει.

Τὸ δὲ τῆς ἐβένου ξύλον κατὰ μὲν τὴν πρόσοψιν ὅμοιον πύξῳ φλοῖσθὲν δὲ μέλαν γίνεται· χρήσιμον δὲ πρὸς ὀφθαλμίας ἀκόνῃ τριβόμενον.

Ἡ δὲ ἀριστολογία παχεῖα καὶ ἐσθιομένη πικρὰ τῷ χρώματι μέλαινα καὶ εὖοσμος, τὸ δὲ φύλλον στρογγύλον, οὐ πολὺ δὲ τὸ ὑπὲρ τῆς γῆς. φύεται δὲ καὶ μάλιστα ἐν τοῖς ὄρεσι· καὶ αὕτη βελτίστη. τὴν δὲ χρεῖαν αὐτῆς εἰς πολλὰ καταριθμοῦσιν· ἀρίστη μὲν πρὸς τὰ κεφαλόθλαστα, ἀγαθὴ δὲ καὶ πρὸς τὰ ἄλλα ἔλκη καὶ πρὸς τὰ ἐρπετὰ καὶ πρὸς ὕπνον καὶ πρὸς ὕστεραν ὡς πεσσός, τὰ μὲν σὺν ὕδατι ἀναδευομένη καὶ καταπλαττομένη, τὰ δ' ἄλλα εἰς μέλι ξυομένη καὶ ἔλαιον· τῶν δὲ ἐρπετῶν ἐν οἴνῳ ὀξίνη πινομένη καὶ ἐπὶ τὸ δῆγμα ἐπιπαττομένη· εἰς ὕπνον δὲ ἐν οἴνῳ μέλανι αὐστηρῶ κνισθεῖσα· ἐὰν δὲ αἰ μῆτραι προπέσωσι, τῷ ὕδατι ἀποκλύζειν. αὕτη μὲν οὖν ἔοικε διαφέρειν τῇ πολυχρηστία.

[5] Τῆς δὲ σκαμμωνίας ὥσπερ ἐξ ἐναντίας ὁ ὀπὸς μόνον χρήσιμος ἄλλο δ' οὐδέν.

Ἡ δὲ τῆς πτερίδος ρίζα μόνον τῷ χυλῷ γλυκύστρυφνος· ἔλμινθα δὲ πλατεῖαν ἐκβάλλει· σπέρμα δὲ οὐκ ἔχει οὐδὲ ὀπὸν· τέμνεσθαι δὲ ὠραίαν μετοπώρου φασίν.

Ἡ δ' ἔλμις σύμφυτον ἐνίοις ἔθνεσιν· ἔχουσι γὰρ ὡς ἐπὶ πᾶν Αἰγύπτιοι Ἀραβες Ἀρμένιοι Ματαδίδες Σύροι Κίλικες· Θρᾶκες δ' οὐκ ἔχουσιν οὐδὲ Φρύγες· τῶν δὲ Ἑλλήνων Θηβαῖοί τε οἱ περὶ τὰ γυμνάσια καὶ ὅλως Βοιωτοί· Ἀθηναῖοι δ' οὔ.

Πάντων δὲ τῶν φαρμάκων ὡς ἀπλῶς εἰπεῖν βελτίω τὰ ἐκ τῶν χειμερινῶν καὶ προσβόρρων καὶ ξηρῶν· δι' ὃ καὶ τῶν ἐν Εὐβοίᾳ τὰ ἐν ταῖς Αἰγαῖς ἢ τὰ ἐν τῷ Τελεθρίῳ φασί· ξηρότερα γάρ· τὸ δὲ Τελέθριον σύσκιον.

[6] Περὶ μὲν οὖν τῶν ριζῶν ὅσαι φαρμακώδεις καὶ ὅποιασούν ἔχουσι δυνάμεις εἴτε ἐν αὐταῖς εἴτε ἐν τοῖς ὁποῖς ἢ καὶ ἄλλῳ τινὶ τῶν μορίων, καὶ τὸ ὅλον εἴ τι φρυγανικὸν ἢ ποῶδες ἔχει τοιαύτας δυνάμεις, καὶ περὶ τῶν χυλῶν τῶν τε εὐόσμων καὶ τῶν ἀόσμων καὶ ὅσας ἔχουσι διαφοράς, αἵπερ οὐθὲν ἥττον φυσικαί εἰσιν, εἴρηται.

De causis plantarum

Liber I

ΘΕΟΦΡΑΣΤΟΥ ΠΕΡΙ ΦΥΤΩΝ ΑΙΤΙΩΝ Α

[1] Τῶν φυτῶν αἱ γενέσεις ὅτι μὲν εἰσι πλείους καὶ πόσαι καὶ τίνες ἐν ταῖς ἱστορίαις εἴρηται πρότερον. ἐπεὶ δὲ οὐ πᾶσαι πᾶσιν, οἰκείως ἔχει διελεῖν τίνες ἐκάστοις καὶ διὰ ποίας αἰτίας, ἀρχαῖς χρωμένους ταῖς κατὰ τὰς ἰδίας οὐσίας· εὐθὺ γὰρ χρὴ συμφωνεῖσθαι τοὺς λόγους τοῖς εὐρημένοις.

ἡ μὲν οὖν ἀπὸ τοῦ σπέρματος γενέσεις κοινὴ πάντων ἐστὶ τῶν ἐχόντων σπέρμα· πάντα γὰρ δύναται γεννᾶν. τοῦτο δὲ καὶ τῇ αἰσθήσει φανερόν ὅτι συμβαίνει, κατὰ δὲ τὸν λόγον ἴσως ἀναγκαῖον. ἡ γὰρ φύσις οὐδὲν ποιεῖ μάρτην, ἥκιστα δὲ ἐν τοῖς πρώτοις καὶ κυριωτάτοις· πρῶτον δὲ καὶ κυριώτατον τὸ σπέρμα, ὥστε τὸ σπέρμα μάρτην ἂν εἴη μὴ δυνάμενον γεννᾶν, εἴπερ τούτου χάριν αἰεὶ τὸ σπέρμα καὶ πρὸς τοῦτο πέφυκεν.

[7] ὅπερ ἐκ τῶν ἄλλων πάντων λαμβάνειν ἐστὶν ὁμολογούμενον. ἀλλὰ διὰ τὸ μὴ χρῆσθαι τοὺς γεώργους ἐπ' ἐνίων, ὅτι θᾶπτον ἀπ' αὐτομάτων παραγίνεται, καὶ διὰ τὸ μὴ εἶναι ῥαδίως ἐπὶ τινων λαμβάνειν μήτε τῶν δένδρων μήτε τῶν ποιωδῶν τὰ σπέρματα, διὰ ταῦτ' οὐκ οἴονταί τινες πάντ' ἀπὸ σπέρματος ἐνδέχεσθαι. καίτοι, καθάπερ ἐν ταῖς ἱστορίαις εἴρηται, καὶ φανερώτατον ἐπὶ τῶν συκῶν. ἔτι δὲ κατ' ἄλλον τρόπον ἡ βλάστησις αὐτῶν, εἴ τι τῶν αὐτομάτων ἐκ συρροῆς καὶ σήψεως, μᾶλλον δὲ ἀλλοιώσεως γινομένης φυσικῆς. ὅτι μὲν οὖν κοινὴ πᾶσιν ἡ διὰ τοῦ σπέρματος γενέσεις φανερόν. εἰ δ' ἀμφοτέρως ἔνια, καὶ αὐτόματα καὶ ἐκ σπέρματος, οὐδὲν ἄτοπον· ὥσπερ καὶ ζῳά τινα, καὶ ἐξ ἀλλήλων καὶ ἐκ τῆς γῆς.

[8] διὸ καὶ αἱ γενέσεις κατὰ τὰς ἰδίας ἐκάστων φύσεις. ὅσα μὲν γὰρ ξηρὰ καὶ μονοφυῆ καὶ ἀπαράβλαστα, ταῦτ' οὐδεμίαν, ὥς εἰπεῖν, δέχεται φυτεῖαν οὔτε ἀπὸ παρασπάδος οὔτε ἀπὸ ἀκρεμόνος· τὴν μὲν ἀπὸ παρασπάδος τῷ μὴ ἔχειν τὰ μονοφυῆ, τὴν δὲ ἀπὸ ἀκρεμόνος καὶ κλωνὸς διὰ τὴν ξηρότητα. αἰεὶ γὰρ τὸ μέλλον βλαστάνειν ἔχειν τε δεῖ τὴν ἔμβιον ὑγρότητα καὶ ταύτην δύνασθαι τηρεῖν. τὰ δὲ φύσει ξηρὰ διὰ τὸ ὀλίγην ἔχειν, ὅταν ἀπὸ τοῦ δένδρου ἀφαιρεθῇ, ταχὺ διαπνεῖται καὶ «ἐξ»ατμίζεται συνεξάγονθ' ἅμα καὶ τὸ σύμφυτον θερμόν.

[9] καὶ ταῦτα μὲν διὰ τὰς εἰρημένας αἰτίας. τὰ δὲ παραβλαστικά καὶ «οὐ» μονοφυῆ συμμετρία τινὶ τοῦ θερμοῦ καὶ ὑγροῦ δέχεται καὶ τὰς ἄλλας δυνάμενα τηρεῖν τὴν ὑγρότητα καὶ θερμότητα τὴν ξύμφυτον, ὥστε βλαστάνειν μὴ μόνον ἀπὸ παρασπάδος ἀλλ' ἔνια καὶ ἀπὸ τῶν ἄκρων οἶον συκῇ καὶ ἄμπελος καὶ τῶν ἀκάρπων δὲ καὶ φυλῶδρων ὥσπερ ἰτέα καὶ ἀκτὴ καὶ

λευκή καὶ αἴγειρος. καθόλου μὲν οὖν καὶ τύπῳ τοῦτον διωρίσθω τὸν τρόπον.

[2.1] οὐ μὴν ἀλλὰ μάλιστ' ἡ μόνος τῶν ξηρῶν καὶ μονοφυῶν καὶ ἀπαρβλάστων ὁ φοῖνιξ δέχεται καὶ ἐτέρας γενέσεις παρὰ τὴν σπερματικήν. τὰς τε γὰρ ῥάβδους φασὶ μοσχεύειν περὶ Βαβυλῶνα τὰς ἀπαλωτάτας, καὶ ὅταν ἐμβιώσωσι μεταφυτεύουσι· καὶ ἐν τοῖς περὶ τὴν Ἑλλάδα τόποις ἐὰν ἀποκόψας τις τᾶν φυτεύσῃ ῥιζοῦσθαι. καὶ βλαστάνειν οὐκ ἀπὸ τοῦ ἐγκεφάλου μόνον ἀλλὰ καὶ κάτωθεν αὖξιν τὰς ῥίζας. ἔτι δὲ ἂν πλάγιος τεθῇ καὶ ἐνικμος ἢ γῇ τυγχάνῃ, πολλαχόθεν ῥιζοφύειν καὶ ἐκβλαστάνειν, οὐ μέντοι μέγεθος τοῦτο λαμβάνειν.

[2] ἐπὶ δὲ πεύκης καὶ ἐλάτης καὶ εἴ τι παραπλήσιον τούτοις, οὐδὲν συμβαίνει τοιοῦτον, οὐδ' ἐπὶ κυπαρίττου πλὴν εἴ τί που καὶ παραβλαστάνει, καθάπερ φασὶν ἐν Κρήτῃ περὶ τοὺς καλουμένους δρυῖτας· ἐνταῦθα γὰρ οὐδὲν ἄλογον, ὥσπερ καὶ τὰς ἄλλας παραφυάδας ὑπορρίζους οὔσας καὶ ἐνύγρους, καὶ ταύτας βλαστάνειν· ἐπεὶ εἴ γε μὴ ἦσαν ὑπόρριζοι χαλεπὸν ἢ ἀδύνατον. τοῦτο μὲν οὖν ὥς πρὸς ὑπόθεσιν λεγόμενον.

[3] ὁ δὲ φοῖνιξ ἀπὸ μὲν τῶν ῥάβδων βλαστάνει χώρας εὐβοσία καὶ εὐφυῖα πρὸς τὸ θάπτον βλαστάνειν. τὸ δ' ἀπὸ τῶν ἀπαλωτάτων εὐλογον εἰ ὑγρόταται αὐταὶ καὶ γεννητικώταται. ἀπὸ δὲ τοῦ ἐγκεφάλου διὰ τῶν ὑποκάτω μᾶλλον ἔτι τοῦτο εὐλογον· ἐντεῦθεν γὰρ καὶ ἡ τῶν ῥάβδων φύσις καὶ ὅλως οἷον ἀρχὴ τις αὕτη ζωτική. διὸ καὶ ἐξαιρουμένου καὶ πονήσαντος θνήσκει· ἐπεὶ καὶ ἡ ἐκ τῶν πλαγίων ἔκφυσις ἔχοντός ἐστι τὸν ἐγκέφαλον· ἐξαιρουμένου γὰρ αὐαίνεσθαι κατὰ λόγον, εἴπερ καὶ πεφυκότος καὶ ἐρριζωμένου τοῦτο συμβαίνει.

[4] ἡ δὲ ἔκφυσις δῆλον ὅτι πανταχόθεν· πανταχοῦ γὰρ διαμένει μέχρι τινὸς ἢ ὑγρότης καὶ ἢ θερμότης, διὰ τὸ μὴ εὐξήραντον εἶναι τῇ πυκνότητι τῶν πόρων, διὸ καὶ δυσδιάπνευστον. ὁ μὲν οὖν φοῖνιξ διὰ ταῦτα πλεοναχῶς γίνεται. τῶν δὲ ἄλλων τῶν μονοφυῶν οὐδὲν διὰ τὸ μὴ τοιαύτην ἔχειν τὴν φύσιν.

[3.1] Ὅσα δὲ πλείους γεννᾶται τρόπους, ἔχει καὶ ἐν αὐτοῖς διαφοράν. τὰ γὰρ ἀπὸ παρασπάδος καὶ ῥίζης καὶ κλωνὸς οὐ πάντως δύναιεν· ἂν καὶ ἀπὸ ξύλου καὶ ἀπὸ ἀκρεμόνος καθάπερ ἄμπελος καὶ συκῇ, τὰ δὲ πάλιν «οὐκ» ἀπὸ τῶν βλαστῶν ὥσπερ καὶ ἡ ἐλάα. τὸ δὲ αἰτίον ἐν ἀμφοῖν ταῦτόν καὶ παραπλήσιον. ἀμπέλου μὲν γὰρ καὶ συκῆς καὶ τῶν ἄλλων τῶν τοιούτων ξηρὰ καὶ ξυλώδη τὰ μέσα, καὶ ἐνίων τραχέα, τὸ δὲ τραχὺ δυσβλαστές· τὰ δὲ ἄκρα καὶ ἀπαλὰ καὶ ἐνυγρα καθάπερ τὸ κλῆμα καὶ ἡ κράδη· καὶ ἐπὶ τῆς ἰτέας δὲ καὶ τῶν ἄλλων ὁμοίως.

[2] ἐλάας δὲ τὰ μὲν τῶν ἀκρεμόνων ἔνικμα διὰ τὴν λιπαρότητα καὶ πυκνότητα καὶ ἀμφοτέρως ἀξήρανα, τὰ δ' ἄκρα διὰ λεπτότητα ξηρὰ καὶ οὐ δυνάμενα διαμένειν. ὡσαύτως καὶ ἀπίου καὶ ἀμυγδαλῆς καὶ μηλέας καὶ δάφνης καὶ ἄλλων· ἀβλάστητα γὰρ τὰ τούτων διὰ τὴν αὐτὴν αἰτίαν, πλὴν εἴ τι σπάνιον καὶ ὥς ἐν παραλόγῳ· καὶ γὰρ τὸ ἀπ' ἀκρεμόνων ἐνίων σπάνιον οἶον ἀμυγδαλῆς. δάφνην δὲ ἀδύνατον, ἐπεὶ οὐδὲ ἀπὸ παρασπάδος θέλει ῥαδίως. αἰτία δ', ὥσπερ ἐλέγομεν, ἡ ξηρότης καὶ τούτου γ' ἔτι ἡ μανότης· ἀσθενέστερον γὰρ καὶ πρὸς τὸ διατηρῆσαι ἐπὶ πλεῖον τὸ μανόν.

[3] ὅσα δὲ καὶ ἀπὸ ξύλων ἔμβια καὶ δύναται βλαστάνειν, οἶον ἐλάα, μύρρινος, κότινος, καὶ αὐτὰ τῇ πυκνότητι, καθάπερ ἐλέχθη, τηρεῖ τὴν ζωτικὴν ἀρχήν, ἔχοντά τινα ὑγρότητα τοιαύτην. οὐ γὰρ ἰκανόν, ἐὰν ἦ πυκνόν γε, εἰ ξηρὸν καὶ ἀπαράβλαστον· ἔτι δὲ καὶ ἡ παραβλάστησις τῶν τοιούτων διὰ τὸ πρεμνώδη καὶ συνεστραμμένην πῶς εἶναι τὴν ρίζαν, ὥσπερ καὶ τῆς δάφνης. ἰσχύει γὰρ μᾶλλον, ἢ καὶ δυσώλεθρα τὰ τοιαῦτα· τὸ γὰρ καταλειπόμενον ἀεὶ βλαστητικόν· τῶν δὲ μακρορρίζων, διὰ τὴν τῶν ριζῶν ἰσχύν, ὥσπερ ἀπίου καὶ κοκκυμηλέας καὶ ἐτέρων.

[4] τάχα δὲ καθόλου περὶ πάντων ὧδε λεκτέον· πρῶτον μὲν ὅτι μετέωρα καὶ οὐ βαθύρριζα, ἢ εἰ καὶ τινα εἰς βάθος καθιᾶσιν, ἀλλ' ἐνίας καὶ ἐπιτολῆς. ἔπειθ' ὅτι πάντων, ὅταν συρροῆς γενομένης συνθερμανθῇ τοῦτο καὶ πεφθὲν ὑπὸ τοῦ ἡλίου καθάπερ κυῆσαν ἐκτέκη, καὶ ἐκ τῶν ἀκρεμόνων οὕτω καὶ ἐκ τῶν ἄλλων οἱ βλαστοί. τούτων δὲ ὑποκειμένων, κατὰ λόγον ἤδη τὸ παραβλαστάνειν. ἢ γὰρ ρίζα μετέωρος οὔσα καὶ συρροὴν λαμβάνουσα, ταύτην ἐκθερμαίνουσα καὶ πέττουσα μεθίησι τὸν βλαστόν.

[5] τὰ μὲν οὖν πλεῖστα παρ' αὐτὸ τὸ στέλεχος ἐκβλαστάνει· μετεωρότατα γὰρ αὐταὶ καὶ ἡ γε ἐλάα καὶ ἐκ τῶν πρέμνων. ἅπιος δὲ καὶ ῥόα καὶ ὅσα μὴ μόνον σύνεγγυς, ἀλλὰ διὰ πολλοῦ, μακρόρριζα ὄντα, ἢ ἂν ἡ ρίζα μετέωρος ἦ, ταύτη τὸν βλαστόν ἀφήσιν· ἐνταῦθα γὰρ ἡ συρροὴ καὶ πέψις θερμαινομένης. διὸ καὶ ἄτακτος ὁ τόπος <ὅτι> ἄτακτος ὁ μετεωρισμὸς καὶ ἡ συρροή. τὰ δ' ἄκαρπα καὶ εὐζῶα, καθάπερ αἶγειρος καὶ λεύκη, καὶ συμπληροῦν δύναται βλαστάνοντα. τὰ δ' ἄλλα οὐχ ὁμοίως, ἀλλ' ἐπὶ τῶν ὑλημάτων καὶ ποιωδῶν ἐνίων τοῦτο συμβαίνει. πρὸς ἃ καὶ δεῖ μεταβῆναι τὸν λόγον· ὑπὲρ γὰρ τῶν δένδρων ἰκανῶς εἴρηται.

[4.1] Τούτων δὲ τὰς μὲν γενέσεις ἐκ τῶν αὐτῶν θεωρητέον κοινοτάτην πᾶσι τὴν ἀπὸ σπέρματος τιθέντας. οὐ μὴν ἀλλὰ καὶ πλείους εἰσὶ καὶ τούτων, ἢ δὲ ἕκαστα τῶν προειρημένων ἐφάπτεται ταύτῃ διαιρετέον· οἶον καὶ ὑπὲρ ἧς νῦν

λέγομεν τῆς ἀπὸ τῶν ρίζων. ἓνια γὰρ καὶ αὐτόματα βλαστάνει καὶ φυτεύουσιν ἀπὸ τῶν ρίζων, ὥσπερ τὰ κεφαλόρριζα καὶ ὅλως ὧν παχεῖα καὶ σαρκώδης ἐστὶν ἡ ρίζα. δεῖ δὲ καὶ τὰ μὲν ὑδατῶδες μὴ πλεῖον ἔχειν ὥσπερ τῆς γογγυλίδος καὶ ῥαφανίδος· εὐξήραντοι γὰρ αὗται καὶ ἀσθενεῖς εἰς διαμονήν. ἀλλ’ ἦτοι χιτῶνας ἔχειν πλείους καὶ ἅμα γλισχρότητα τινα, καθάπερ αἱ τοῦ βολβοῦ καὶ σκύλλης καὶ ὅλως εὐχυλόν τινα καὶ εὐσαρκον εἶναι, καθάπερ αἱ τοῦ ἀμαράκου τοῦ χλωροῦ καὶ τοῦ λειρίου καὶ τῶν ὁμοειδῶν.

[2] αἱ γὰρ τοιαῦται φυτεῖαν μόνον δέχονται καὶ μέταρσιν. καὶ τούτων αἱ μὲν καὶ πλείω χρόνον διαμένουσιν, αἱ δὲ ἐλάττω κατὰ τὰς ἰδίας φύσεις ἐκάστων. ἄλλαι δ’ αὖ πάλιν εἰσὶ τινες αἱ μένουσαι μὲν ἐν ταῖς ἐαυτῶν χώραις ἀφίᾱσι βλαστὸν οἷον αἱ τῶν ἐπετειοκαύλων, μεταιρόμεναι δ’ οὐ δύνανται διὰ τὴν ξηρότητα. τὴν γὰρ αὐτὴν αἰτίαν ὑποληπτέον καὶ ἐπὶ τούτων, ἦνπερ ἐπ’ ἐκείνων.

Ἔστι δὲ τινων καὶ ἀπὸ παρασπάδος καὶ ἀπὸ τῶν ἄκρων φυτεία καὶ γένεσις. ἀπὸ παρασπάδος μὲν καὶ ῥαφάνου καὶ πηγάνου, τῶν δὲ στεφανωτικῶν οἷον ἀβροτόνου καὶ σισυμβρίου καὶ ἐρπύλλου· καὶ ἀπὸ τῶν ἄκρων δ’ ἐνίων τῶν αὐτῶν, πηγάνου τε καὶ ἀβροτόνου καὶ τῶν στεφανωτικῶν·

[3] καὶ γὰρ ἔχει ταῦτά γε καὶ καθήσιν εὐθὺς ρίζας ἐκ τῶν βλαστῶν ὥσπερ ὁ κιττός· οὗτος γὰρ δὴ μάλισθ’ ὅλως ἔμβιος καὶ εἰσδυόμενος εἰς αὐτὰ τὰ δένδρα καὶ ἐν τῇ γῇ κρυπτόμενος. τῶν δὲ λαχανωδῶν τὸ ὠκιμον· καὶ γὰρ τὰς ἀποφυτείας ἐκ τῶν ἄνω δέχεται, καίπερ ξυλῶδες ὄν, ἀλλ’ ὅτι δυσξήραντόν ἐστι ταύτῃ φύεται. διὸ καὶ πολὺν χρόνον διαμένει καὶ κολουόμενον πάλιν βλαστάνει. ξυλῶδες δὲ καὶ τὸ ἀβρότονον, ἀλλ’ ἔχει τινὰ τῇ πυκνότητι καὶ δριμύτητι φυλακὴν ὥσπερ ὁ κιττός· καὶ γὰρ οὗτος φύεται καταπηγνύμενος.

[4] αὗται μὲν οὖν κοινὰι πλείονων, αἱ δὲ τοιαῦται καὶ σπάνιαι καὶ ἐλάττους ὥσπερ τῆς κρινωνίας καὶ ῥοδωνίας. καὶ ὁ κάλαμος ὁ σχισθεὶς φύεται καὶ βλαστάνει. ταῦτα δὲ ὅμοια καὶ παραπλήσια καὶ τὰ τῆς ἐλάας καὶ εἴ τι ἄλλο βλαστητικὸν ἀπὸ τοῦ ξύλου. διὸ καὶ ὑπὸ τὴν «αὐτὴν» αἰτίαν πίπτει· δύνανται γὰρ διατηρεῖν τὴν ὑγρότητα καὶ θερμότητα τὴν γόνιμον. καὶ τό τε κατακόπτειν καὶ κατασχίζειν εὐλογον. ἐκ γὰρ τοῦ ἐλάττονος καὶ ἀνεωγμένου θάπτον ἢ ἀρχὴ καὶ εὐκολωτέρα· τὸ δὲ μέγα καὶ συμπεπτωκὸς οὐχ ὁμοίως παθητικὸν οὐδὲ βλαστητικόν.

[5] διὸ καὶ τὰ σκόρδα διαιροῦσιν εἰς τὰς γέλγεις καὶ τῶν κρομμύων ἀφαιροῦσι τὰς τε ρίζας τὰς κάτω καὶ τὰ κελύφη. ταῦτα γὰρ παρέχει πᾶν τὸ ἀλλότριον· ἀλλότριον δὲ τῷ ζῶντι τὸ μὴ ζῶν· ὥσπερ καὶ τῶν δένδρων τὰ

ἀφαναινόμενα. τῆς μὲν οὖν ἐλάας καὶ τῶν μυρρίνων οὐ δεῖ περιαιρεῖν τὸν φλοιόν, ἀποστέγει γὰρ καὶ τηρεῖ τὴν ζωὴν· τῶν δὲ κρομμύων καὶ σκόρδων δεῖ, δεῖ δὲ μὴ τοὺς ζῶντας μηδὲ τοὺς κυρίους ἀφαιρεῖν· ἐπεὶ κακείνων εἴ τις ἀφαιροίη τούτους <οὐ> βλαστάνει.

[6] ἰδιωτάτῃ δὲ βλάστησις ἢ ἐκ τῶν δακρύων, οἶον τοῦ θ' ἵπποσελίνου καὶ τοῦ κρίνου καὶ ἐνίων ἐτέρων. οὐκ ἄλογος δὲ ἀλλ' ὁμολογουμένη τῇ ἐκ τῶν καυλῶν. οὐδὲν γὰρ ἕτερον ἀλλ' ἢ ξυνηθορισμένην δεῖ εἶναι καὶ ἐν ἐκείνοις ἀρχὴν τὴν γόνιμον· οὐ γὰρ ἄνευ θερμότητος ἢ τοιαύτης καὶ ὑγρότητος. ὅτι δ' οὐ πάντων οἱ ὅποι καὶ τὰ δάκρυα γεννητικά, πρὸς τὰς ἐπάνω καὶ προτέρας αἰτίας ἀνακτέον. ὅτι δ' οὐδ' οἱ καυλοὶ οὐδ' αἱ ρίζαι, κατὰ λόγον δὲ καὶ τοῦτ' ἐστίν, ὅπερ ἐλέχθη πρότερον, ὅτι πλείους αἱ γενέσεις καὶ τῶν ἄλλων ἢ τῶν ἄλλων ῥάδιον γεννηῖσαι τὰ ἀτελέστερα καὶ ἀπ' ἐλάττονος ἀρχῆς. αἱ μὲν οὖν ἐκ τῶν μορίων ὅποιαι, καὶ διὰ τίνας αἰτίας, ἐκ τούτων θεωρεῖσθω. καὶ γὰρ εἴ τι παραλέλειπται, προσθεῖναι καὶ συνιδεῖν οὐ χαλεπόν.

[5.1] Αἱ δ' αὐτόματοι γίνονται μὲν ὡς ἀπλῶς εἰπεῖν τῶν ἐλαττόνων καὶ μάλιστα τῶν ἐπετειῶν καὶ ποιωδῶν· οὐ μὴν ἀλλὰ καὶ τῶν μειζόνων ἔστιν ὅτε συμβαίνουσιν ὅταν ἢ ἐπομβρίαὶ κατάσχωσιν ἢ ἄλλη τις ἰδιότης γένηται περὶ τὸν ἀέρα καὶ τὴν γῆν. οὕτω γὰρ καὶ τὸ σίλφιον ἀνατεῖλαί φασιν ἐν Λιβύῃ πιττώδους τινὸς ὕδατος γενομένου καὶ πάχεος, καὶ τὴν ὕλην δὲ τὴν νῦν οὔσαν ἐξ ἐτέρας τινὸς τοιαύτης αἰτίας· οὐ γὰρ ἦν πρότερον.

[2] αἱ δ' ἐπομβρίαὶ καὶ σήψεις τινὰς ποιοῦσι καὶ ἀλλοιώσεις, ἐπὶ πολὺ διῖκνουμένου τοῦ ὑγροῦ, καὶ τρέφειν καὶ ἐπαύξειν δύνανται τὰ συνιστάμενα, θερμαίνοντος τοῦ ἡλίου καὶ καταξηραίνοντος, ὥσπερ καὶ τὴν τῶν ζώων γένεσιν οἱ πολλοὶ ποιοῦσιν· εἰ δὲ δὴ καὶ ὁ ἀήρ σπέρματα δίδωσι συγκαταφέρων ὥσπερ φησὶν Ἀναξαγόρας καὶ πολλῶ μᾶλλον· ἄλλας γὰρ ἂν ποιοῖεν ἀρχὰς καὶ τροφάς.

ἔτι δ' οἱ ποταμοὶ καὶ αἱ συρρόαι καὶ ἐκρήγματα τῶν ὑδάτων πολλαχόθεν ἐπάγουσι σπέρματα καὶ δένδρων καὶ ὑλημάτων, διὸ καὶ αἱ μεταστάσεις τῶν ποταμῶν πολλοὺς τόπους ποιοῦσιν ὑλώδεις τοὺς πρότερον ἀνύλους.

[3] ἀλλ' αὐταὶ μὲν οὐκ αὐτόματοι δόξαιεν ἄν, ἀλλ' ὥσπερ σπειρόμεναί τινες ἢ φυτευόμεναι. τὸ δὲ τῶν ἀκάρπων οἰηθεῖται τις ἂν μᾶλλον αὐτομάτους εἶναι, μήτε φυτευομένων μήτε ἀπὸ σπέρματος γινομένων, ὅπερ ἀναγκαῖον εἶναι μὴδ' ἕτερον τούτων.

ἀλλὰ μή ποτ' οὐκ ἦ τοῦτ' ἀληθὲς ἐπὶ γε τῶν μειζόνων, ἀλλὰ μᾶλλον λανθάνουσιν αἱ πᾶσαι τῶν σπερμάτων φύσεις· ὅπερ καὶ ἐν ταῖς ἱστορίαις

ἐλέχθη περί τε τῆς ἰτέας καὶ τῆς πτελέας. ἐπεὶ καὶ τῶν ἐλαττόνων πολλὰι διαλανθάνουσι τῶν ποιωδῶν, ὥσπερ καὶ περὶ τοῦ θύμου καὶ ἐτέρων ὧν εἵπομεν ὡς κατὰ μὲν τὴν ὄψιν οὐ φανερά, κατὰ δὲ τὴν δύναμιν φανερά· σπειρομένων γὰρ τῶν ἀνθῶν γεννᾶται.

[4] καὶ δυσόρατα καὶ μικρὰ καὶ τῶν δένδρων ἔνια σπέρματα τυγχάνει καθάπερ καὶ τῆς κυπαρίττου. ταύτης γὰρ οὐχ ὅλος ὁ καρπὸς <ὁ> σφαιροείδης ἐστίν, ἀλλὰ τὸ ἐγγινόμενον ἐν τούτῳ λεπτὸν καὶ ὥσπερ πιτυρῶδες καὶ ἀμενηνὸν ὅπερ ἐκπέτεται διασχασκόντων τῶν σφαιρίων, διὸ καὶ ἐμπεύρου τινός ἐστι συλλέξαι τὴν θ' ὥραν παρατηρεῖν αὐτό <τε> τὸ σπέρμα γνωρίζειν δυναμένου. ἐπὶ πολλῶν μὲν οὖν καὶ τοῦτο συμβαίνει καὶ μάλιστα ὅσα συνεχῇ ἐν ταῖς ὕλαις ταῖς ἀγρίαις καὶ τοῖς ὄρεσιν ἐστίν· οὐ γὰρ ῥάδιον αὐτομάτως συνισταμένων διαμένειν τὸ συνεχές, ἀλλὰ δυοῖν θάτερον, ἢ ἀπὸ ρίζης ἢ ἀπὸ σπέρματος βλαστάνει.

[5] ὀλίγα δ' ἄκαρπα τῶν ὁμογενῶν οἱ ὑλοτόμοι φασὶν εἶναι. ταῦτα ἤτοι λανθάνειν εἰκὸς ἢ διὰ τὸ καταναλίσκειν εἰς τὰ ἄλλα τὴν τροφήν ἄκαρπα γίνεσθαι, καθάπερ τὰς ἀμπέλους τὰς τραγώσας καὶ ὅσοις ἄλλοις τοῦτο συμβαίνει. γινόμενον δ' ἐπὶ τῶν καρπίμων καὶ ἀνθοφόρων, τί κωλύει τοῦτο συμβαίνειν ἐπὶ τῶν ἄλλων ὥσπερ πηρουμένων πρὸς καρπογονίαν; ἀλλὰ τοῦτο μὲν ὡς ἐπιδοξαζόμενον εἰρήσθω, δεῖ δὲ ἀκριβέστερον ὑπὲρ αὐτοῦ σκέψασθαι καὶ ἀνιστορῆσαι τὰς αὐτομάτους γενέσεις. ὡς δὲ ἀπλῶς εἰπεῖν, ἀναγκαῖον γίνεσθαι διαθερμαινομένης τῆς γῆς καὶ ἀλλοιουμένης τῆς ἀθροισθείσης μίξεως ὑπὸ τοῦ ἡλίου, καθάπερ ὁρῶμεν καὶ τὰς τῶν ζώων.

[6.1] Λοιπὸν δ' εἰπεῖν ὑπὲρ τῶν ἐν ἄλλοις γενέσεων οἷον τῶν κατὰ τὰς ἐμφυτείας καὶ τοὺς ἐνοφθαλμισμούς. ἀπλοῦς δὲ τις λόγος καὶ σχεδὸν εἰρημένος πρότερον. ὥσπερ γὰρ γῇ χρῆται <θατέρῳ> τὰ ἐμφυτευόμενα· καὶ φυτεία δὲ τις καὶ ὁ ἐνοφθαλμισμός, οὐ μόνον παράταξις. ἀλλ' ἐνταῦθα δῆλον ὅτι καὶ τὸ βλαστάνον καὶ τὸ γεννῶν ἢ ὑγρότης ἐστίν ἢ γόνιμος· ἤνπερ <ὁ> ὀφθαλμὸς ἔχων ἀρμόττεται θατέρῳ καὶ τὴν τροφήν ἔχων ἀποδίδωσι τὴν οἰκίαν βλάστησιν.

[2] εὐαυξῇ δὲ πάντα τὰ τοιαῦτα διὰ τὸ κατειργάσθαι τὰς τροφὰς καὶ τὰς διὰ τῶν ἐνοφθαλμισμῶν ἔτι μᾶλλον· καθαρωτάτη γὰρ αὕτη, [καί] ὥσπερ ἐν τοῖς στελέχεσιν ἤδη τῶν καρπῶν. εὐπρόσφυτον δ' αἰεὶ τῷ ὁμοίῳ τὸ ὅμοιον· ὁ δὲ ὀφθαλμὸς ὥσπερ ὁμογενές. εὐλόγως δὲ καὶ ἡ ἀντίληψις μάλιστα τῶν ὁμοιοφλοίων· ἐλαχίστη γὰρ ἡ ἐξαλλαγὴ τῶν ὁμογενῶν, καὶ ὥσπερ μετάθεσις γίνεται μόνον· ἅμα γὰρ συμβαίνει καὶ τοὺς ὁποὺς ὀργᾶν καὶ τὰ ὅλα δένδρα

πρὸς τὴν βλάστησιν, ὥσθ' ὅταν ὁμοιόν τε ἦ καὶ ὁμοιοπαθὲς τοῖς καρποῖς ἐξ ἁμφοτέρων εὐλογον τὸ τάχος τῆς αὐξήσεως· ἐν δὲ τοῖς ἄλλοις ὅσῳ ἂν ἦττων ἦ καὶ τοῖς γένεσι καὶ τοῖς τόποις καὶ τοῖς καιροῖς παραλλαγή.

[3] εὐλογοὶ δὲ καὶ αἱ ὥραι μᾶλλον δὲ ἴσως ἀναγκαῖαι, καθ' ἃς καὶ ὅλως ἐπιβλαστήσεις γίνονται μετόπωρόν τε καὶ ἔαρ καὶ κυνὸς ἐπιτολή· δεῖ γὰρ ὀργῶντα φέρειν. παραπλήσιοι δὲ καὶ οἱ λόγοι καὶ περὶ ἐκάστης οἵπερ καὶ περὶ τῆς φυτείας. οἱ μὲν γὰρ τὴν ἐαρινὴν ἐπαινοῦσιν ἐπ' ἰσημερίαις ἔτι κυόντων· ἅμα γὰρ τῇ ἐγκυήσῃ καὶ βλαστήσῃ καὶ ὁ φλοιὸς ἐπιφύεται καὶ περιλαμβάνει. οἱ δὲ περὶ τὴν ἐπ' ἄρκτουρῳ· παραχρῆμα μὲν γὰρ οἶον ρίζοῦται καὶ οἶον ἐπισυμμύει, προσφυῆς δὲ γενομένη πρὸς τὸ ἔαρ ἀθρόον ἀποδίδωσι τὴν βλάστην ἀπὸ ἰσχυροτέρας ἀρχῆς.

[4] εὐλόγως δ' ἔχει τὸ τὰς μασχάλας ἐνοφθαλμίζειν τὰς λειοτάτας καὶ νεωτάτας· ἀντιλαμβάνεται γὰρ ἐντεῦθεν μάλιστα διὰ τὴν τε λειότητα καὶ ἡλικίαν. εὖζωα γὰρ καὶ εὐβλαστῇ ἐστὶ τὰ νέα. μάλιστα δ' εὐφυῇ πρὸς ἐνοφθαλμισμὸν ὥς γ' ἐνὶ λαβεῖν ὅσων ἡ ὑγρότης ἔχει τι γλίσχρον, ἔτι δ' ἃ μαλακόφλοια καὶ ὁμοιόφλοια καὶ ὁμοιοπαθῇ· διὸ καὶ εἰς τὰ παραπλήσια φύσει καὶ ἡλικία κάλλιστος ὁ ἐνοφθαλμισμὸς· ἢ τε γὰρ γλίσχρότης [καὶ] ἀντιληπτικὴ ὅ τε φλοιὸς μαλακὸς ὢν καὶ ὁμοίως εὐμενῆς [καὶ] οὐ ποιεῖ μεγάλην τὴν μεταβολήν.

[5] ἐστὶ δὲ τοῖς μὲν ἄλλοις βραχὺς ὁ καιρὸς, διὰ τὸ ταχεῖαν εἶναι τὴν βλάστησιν, τῇ ἐλάᾳ δὲ πλείων χρόνος διὰ τὸ πλείω χρόνον ποιεῖν τοὺς ὀφθαλμούς· ἔτι δεῖ ἀπαλὰ τὰ ἔρνη καὶ ἀθρόα διὰ τέλους καὶ τὸν τόπον αὐτῆς ὑγρὸν εἶναι πᾶν τὸ θέρος καὶ ἀπὸ τούτων μάλιστα πάντων βλαστάνει. διὰ τοῦτο οἶονται τινες καὶ τεττάρας καὶ πέντε μῆνας ἀρδεύεσθαι τὴν ἐμφυτεῖαν.

[6] τὸ δ' ὕδωρ τῷ μὲν ἐνοφθαλμισμῷ πολέμιον· ἐκσῆπει γὰρ καὶ ἀπόλλυσι παραρρέον διὰ τὴν ἀσθένειαν· διὸ καὶ ἐπὶ κυνὶ δοκεῖ ἀσφαλέστατος εἶναι, καίτοι νῦν γέ τινες οὕτως περιδοῦσι τοῖς φλοιοῖς ὥστε μὴ παραρρεῖν. τῇ δ' ἐμφυτεῖᾳ χρήσιμον ἂν μὴ ὑγρὸν ἦ τῇ φύσει· διὸ καὶ οἱ μὲν αὐτῷ πηλὸν ἐπικολλαίνουσιν, οἱ δὲ χύτραν προσβάλλουσιν ὕδατος ὥστε κατὰ μικρὸν ἐπιρρεῖν· ἀναξηραίνεται γὰρ ἂν τύχη μὴ ἔχον ὑγρότητα, διὰ τὸ μέγεθος τῆς ἐλκώσεως.

[7] ὀρθῶς δὲ καὶ διατηρεῖν ἀρραγῇ τὸν ὀφθαλμὸν καὶ τὸν φλοιὸν καὶ τὸ ἐνθεμα οὕτως ἀποξύνειν ὥστε μὴ γυμνοῦν τὴν μήτραν· ῥαγέντος γὰρ ἢ γυμνωθείσης ἀναξηραίνεται καὶ διαφθείρεται. διὰ τοῦτο γὰρ καὶ περιδοῦσι φιλύρας ἐξωθεν φλοιῷ καὶ ἐπὶ τούτοις περιαλείφουσι πηλῷ τετριχωμένῳ ὅπως

ἔμμονος ἢ ὑγρότης ἥ καὶ μήθ' ἥλιος μήθ' ὕδωρ μήτε ψυχὸς παραλυσῇ.

[8] καὶ ὅταν σχίσαντες ἐντιθῶσι τὸ ἔνθεμα, σφηνοειδὲς ποιήσαντες ἐν σφύρα ἐλαύνουσιν, ὅπως ὅτι μάλιστα προσαχθῇ· χρή δὲ καὶ τῆς ὑγρότητος τῆς αὐτῶν συμμετρίαν τινὰ ὑπάρχειν. διὸ καὶ τὴν μὲν ἄμπελον προαποτέμνουσιν ἡμέραις τρισὶ πρότερον, ὅπως προαπορρυῇ τὸ δάκρυον καὶ μὴ σήπηται μηδ' εὐρωτιᾷ· ῥόα δὲ καὶ συκῇ καὶ ὅσα τούτων ἐστὶ ξηρότερα παρὰ χρῆμα.

[9] δεῖ δὲ καὶ πρὸς τὰς χώρας λαμβάνειν τὰς οἰκείας ὥρας καὶ πρὸς τὰς τῶν δένδρων φύσεις· ἐπεὶ τὰ μὲν ἔνυδρα, τὰ δὲ ξηρά. καὶ λεπτογείῳ μὲν ἄμεινον τὸ ἔαρ· οἰκεῖον γὰρ οὕτως διὰ τὸ ὀλίγον ἔχειν τὸ ὑγρόν· ἐν δὲ τῇ εὐγείῳ καὶ πηλώδει τὸ μετόπωρον· τοῦ γὰρ ἥρος πολλὴ λίαν ἡ ὑγρότης πρὸς τὸ διατηρεῖν ἕως ἔτι διαμένει τὸ δάκρυον. ὀρίζονται δὲ τινες τοῦτο τριάκονθ' ἡμέραις.

[10] εὐλογον δὲ καὶ τὸ καλλικαρπότερα ταῦτα γίνεσθαι, καὶ μάλιστα ἐὰν τὰ ἡμέρα εἰς τὰ ἄγρια τιθῇται τῶν φυτῶν· εὐτροφία γὰρ συμβαίνει πλείων διὰ τὴν ἰσχὺν τῶν ὑποκειμένων· διὸ καὶ κελεύουσι κοτίνους φυτεῦσαντας ἐνοφθαλμίζειν ἢ ἐμφυτεύειν ὕστερον. ἀντιλαμβάνονται γὰρ μᾶλλον ἰσχυροτέρου καὶ τροφὴν ἐπισπώμενα πλείω καλλίκαρπον τὸ δένδρον ποιεῖ· ἐπεὶ εἴ γέ τις ἀνάπαλιν τὸ ἄγριον εἰς τὸ ἡμερον ἐμβάλλοι, διαφορὰν μὲν τινα ποιήσει, τὸ δὲ καλλικαρπεῖν οὐχ ἔξει. καὶ τὰ μὲν περὶ τὰς φυτείας καὶ τὰς ἐμφυτείας ἱκανῶς εἰρήσθω.

[7.1] Τὰ δὲ σπέρματα πάντων ἔχει τινὰ τροφὴν ἐν αὐτοῖς, ἡ συναποτίκτεται τῇ ἀρχῇ καθάπερ ἐν τοῖς ὠοῖς· ἥ καὶ οὐ κακῶς Ἐμπεδοκλῆς εἴρηκε φάσκων “ὠτοκεῖν μακρὰ δένδρεα.” παραπλησία γὰρ τῶν σπερμάτων ἡ φύσις τοῖς ὠοῖς· πλὴν ἔδει περὶ πάντων εἰπεῖν καὶ μὴ μόνον τῶν δένδρων· ἅπαν γὰρ ἔχει τινὰ τροφὴν ἐν αὐτῷ. διὸ καὶ δύνανται διαμένειν εἰς χρόνον οὐχ ὥσπερ τὰ τῶν ζώων εὐθὺς φθείρεται χωριζόμενα πλὴν τὰ τῶν ὠοτόκων. ταῦτα γὰρ ὥσπερ εἴρηται τροφὴν ἔχοντα καὶ φυλακὴν ἅμα τῆς ἀρχῆς διαμένει.

[2] χρονιώτερα δὲ ἐτέρων ἕτερα, καὶ μάλιστα [τὰ] πυκνὰ καὶ ξηρὰ καὶ ξυλώδη καθάπερ τὰ τοῦ φοίνικος· οὐκ ἔχει γὰρ οὔτε ἐξωθεν οὐδεμίαν παρείσδυσιν οὔτε ἐν αὐτοῖς ὑγρότητα τὴν διαφθειρομένην. ὅθεν καὶ οὔτε θηριοῦται καθάπερ τὰ σιτηρὰ τῶν σπερμάτων οὔτε ἀναξηραίνεται καθάπερ τὰ τῶν λαχάνων, ἀλλ' ἐν αὐτοῖς περιστέγοντα σῶζει τὴν ἀρχήν. ὅτι δ' ἐν ἅπασι σπέρμασι «τροφή» κάκεῖθεν δῆλον· ἃ γὰρ δοκεῖ ξηρὰ καὶ ὥσπερ κελυφανώδη πάνπαν οἷα τὰ τῶν λαχάνων, ταῦτα κινεῖται κατὰ τὰς οἰκείας ὥρας, ἐὰν καὶ ὅτιοῦν ἱκμάδος λάβῃ· καὶ διὰ τοῦτο ἐν ὑπερώοις τιθέασι καὶ κρεμάννυσιν ἐν

ἀρρίχοις καὶ οὕτε ραίνουσιν οὐθ' ὕδωρ ὅλως εἰσφέρουσιν εἰς τὰ οἰκήματα.

[3] τῶν δὲ δὴ λοιπῶν καὶ τῇ αἰσθήσει φανερά τὰ πρόσοντα· καὶ τὰ γε δὴ τῶν σαρκωδῶν ὥσπερ εἰ γαλακτοῦται διαβλαστανόντων. σχεδὸν δὲ ὁμολογούμενον τοῦτο καὶ ἐπὶ τῶν ζώων ἐστίν· οὐδὲ γὰρ ἐν τούτοις ἅπαν τὸ κατὰ πρόεσιν σπέρμα καθαρὸν καὶ εἰλικρινὲς ὑποληπτέον.

ὅσα δὲ ξυλώδη καὶ πυρηνώδη περίκειταιῖ τισι φυλακῆς χάριν οἰητέον, ὥσπερ καὶ τὰ δερματικὰ καὶ ὑμενώδη. πάντα γὰρ ταῦτα πρὸς τὴν σωτηρίαν ἐστίν· ὑγρὰ γὰρ ἢ ἀρχὴ δυνάμει πάντων.

[4] ἔχουσι δὲ τινῶν τὰς ζωτικὰς ἀρχὰς ὥσπερ ἐλέχθη καὶ ρίζαι καὶ ἀκρεμόνες καὶ ξύλα καὶ καυλοὶ χωριζόμενοι τῶν φυτῶν, ὥστε κινεῖσθαι μέχρι τοῦ βλαστάνειν οἷον αἱ τε σκύλλαι καὶ ὅσα σκυλλώδη καὶ τὰ τῆς ἐλάας ξύλα καὶ οἱ τῶν κρίνων καυλοὶ καὶ οἱ τῆς βλήχρου κλώνες. ἀνθεὶ γὰρ καὶ αὕτη περὶ τροπᾶς, ὃ δὴ καὶ μάλιστα θαυμαστόν· ἐπεὶ τὰ γ' ἄλλα φαίνεται τινα ἔχειν ὑγρότητα κούφην καὶ γλίσχραν τὰ δὲ λιπαράν, καὶ ἔτι περιέχεσθαι τὰ μὲν χιτῶσι πλέοσι τὰ δὲ πυκνότητι τῇ αὐτῶν, ὥστε μὴ εὐξήραντα εἶναι· τοῦ δ' ἀέρος μεταβάλλοντος καὶ τῆς οἰκείας ὥρας συμπαθῇ τε γίνεται καὶ βλαστάνει.

[5] ἡ δὲ βλήχρος ξηρὰ φαίνεται παντελῶς, ἀλλὰ δῆλον ὡς ἔχει τινα τοιαύτην ἀρχήν, ἣ κινεῖται τῇ τοῦ ἀέρος ἅμα μεταβολῇ καὶ ἀλλοιωσίει. θαυμαστόν δὲ καὶ τὸ τῆς ὥρας· οὐ γὰρ ἀνιεμένης ἀλλὰ μᾶλλον ἐπιτεινούσης, εἰ μὴ ἄρα περὶ τὰς ἀλκυονίδας· ἱκανὸς γὰρ ὅποσοσούν χρόνος εἰς τὰς τῶν ἀσθενῶν καὶ μικρῶν μεταβολάς. αἱ μὲν οὖν γενέσεις, πόσαι τε καὶ ποσαχῶς καὶ τίνες ἐκάστοις οἰκεῖαι, φανερόν ἐκ τῶν εἰρημένων.

[8.1] Εὐβλαστῇ δὲ καὶ εὐαυξῇ τὰ ἐκ τῶν φυτευμάτων μᾶλλον ἢ ἐκ τῶν σπερμάτων εὐλόγως, ἄλλως τε καὶ ὑπόρριζ' ἂν ληφθῇ· προϋπάρχει γὰρ πολλὰ τῶν μορίων ἃ δεῖται μόνον τροφῆς· τῶν δ' ἐκ τῶν σπερμάτων ἅπαντα ταῦτα ἀνάγκη γεννᾶσθαι πρῶτον ἔπειθ' οὕτως αὐξηθῆναι. τὸν αὐτὸν δὲ τρόπον καὶ ὅσα ῥιζοφυῇ τυγχάνει καθάπερ τὰ κεφαλόρριζα. καὶ γὰρ ἐν τούτοις προΐσταται τῆς φύσεως, ἐξ ὧν πλείων ἢ ὁρμὴ πρὸς τὴν βλάστησιν ἢ τῶν σπερμάτων. ῥιζωθῆναι γὰρ ἐκεῖνα δεῖ πρότερον.

[2] ὅσα δὲ κατὰ τὰς ἰδίας φύσεις, ὡς ἂν γένος πρὸς γένος [ὁ] συγκρίνων λάβοι τις, πότερα κατὰ τὰς εὐθύτητας τῶν πόρων ληπτέον, ὥσπερ Δημόκριτος· εὐρους γὰρ ἢ φορὰ καὶ ἀνεμπόδιστος ὥς φησιν· ἢ μᾶλλον ὅσα μανότερα καὶ ὑγρότερα; τὰ μὲν γὰρ πυκνὰ καὶ ξηρὰ δυσάυξητα. πᾶν γὰρ ἔμπυρον τὸ πυκνὸν καὶ ξηρὸν καὶ πικρόν, ὥστε βραδεῖαν εἶναι τὴν ἐπίδοσιν· θατέρου δ' ἐν ὀλίγῳ πολλὴ διὰ τὴν μανότητα· καὶ ὅλως ἢ μανότης εὐβλαστόν

τι και εὐτροφον.

[3] σημείον δὲ καὶ τὸ κατὰ τοὺς τόπους καὶ τὰς φυτείας συμβαῖνον. ἐν μὲν γὰρ τοῖς εὐδαινοῖς καὶ ἀπνευμάτοις ἔτι δὲ ὅταν ἡ φυτεία πυκνὴ εὐαυξῇ μὲν τὰ δένδρα μανὰ δὲ καὶ ὑγρὰ μᾶλλον. ἐν δὲ τοῖς πνευματώδεσι καὶ ψυχροῖς καὶ τῇ φυτεία μανῇ ἀναυξέστερα μὲν, πυκνότερα δὲ καὶ ξηρότερα. συνίστησι γὰρ τὰ πνεύματα καὶ τὰ ψύχη καὶ ὅλως ὁ προσπίπτων ἀήρ. ἅμα δὲ καὶ συστέλλεται καὶ οὐ λαμβάνει τὸν ἴσον ὄγκον. ὥσαύτως δὲ ὅταν ἡ φυτεία μανῇ· καὶ γὰρ ἐνταῦθα πυκνότερα καὶ εἰς βάθος αὐξανόμενα μᾶλλον, ἐν δὲ ταῖς πυκναῖς ἀνάπαλιν.

[4] φανερόν δὲ καὶ ἐπὶ τῶν ἄλλων ζώων τοῦτο συμβαῖνον καὶ μάλιστα ἐπὶ τῶν ἀνθρώπων· εὐαυξέστερα γὰρ τὰ θήλεα τῶν ἀρρένων, ὑγρότερα καὶ μανότερα τὴν φύσιν ὄντα. δῆλον δὲ καὶ ἐπ’ αὐτῶν τῶν δένδρων· ρόα μὲν γὰρ καὶ συκῇ καὶ ἄμπελος εὐαυξῇ, φοῖνιξ δὲ καὶ κυπάριττος καὶ δάφνη καὶ πεύκη καὶ ἐλάα δυσανξῇ. καίτοι τό γ’ εὐθυπορεῖν ὑπάρχει τισὶ τούτων, ἀλλ’ ἦτοι πυκνότης ἢ ξηρότης ἢ ἄμφω κωλύει· καὶ γὰρ ἡ ξηρότης ἀναυξής. ἔτι δὲ πρὸς τούτοις ἔνια ὑπὸ τῆς ἀσθενείας· καὶ γὰρ τοιαῦτα δυσανξῇ καὶ δύστροφα. δεῖ γὰρ μὴ κρατεῖσθαι μηδὲ κωλύεσθαι τὴν τροφήν ὑπὸ τοῦ περιέχοντος· ἐπεὶ καὶ τὸ εὐθυπορεῖν προσδεῖται δυνάμεως καὶ τῆς κατεργαστικῆς καὶ τῆς ἀπαθοῦς· ἄλλως δ’ οὐδὲν ὄφελος. εὐαυξῇ μὲν οὖν καὶ δυσανξῇ τοῖς τοιούτοις ἀφοριστέον.

[9.1] Ἄπαντα δὲ χεῖρω τὰ ἐκ σπέρματος ὥς ἐπὶ πᾶν ἔν γε τοῖς ἡμέροις οἶον ρόα συκῇ ἄμπελος ἀμυγδαλῇ. καὶ γὰρ ὅλως <τὰ> γένη μεταβάλλει καὶ ἐξαγριοῦται πολλάκις ἔνια, καθάπερ ἐν ταῖς ἱστορίαις εἴρηται.

τούτου δ’ αἴτιον ἡ ἀσθένεια τῶν σπερμάτων. κρατεῖται γὰρ ὑπὸ τῆς ἐπιρροῆς πλείονος οὔσης· καὶ ὥσπερ ἄκαρπα γίνεται διὰ πλεονος τροφῆς οὐ δυνάμενα πέττειν οὕτως καὶ χεῖρω γίνεται διὰ τὸ μὴ κρατεῖν. καὶ διὰ τοῦτο Θάσιοι τὰς ἀμυγδαλᾶς ὅταν προσανξηθῶσιν ἐνοφθαλμίζουσιν· ἐκ γὰρ μαλακῶν σκληραὶ γίνονται μετὰ τὴν φυτείαν· εἴη δ’ ἂν τοῦτο καὶ ἐπὶ τῶν ἄλλων ποιεῖν.

[2] ὅσα δ’ ἰσχυρὰ τῶν σπερματικῶν ταῦτα διαμένει μᾶλλον ὥσπερ ὁ τε φοῖνιξ καὶ πεύκη ἢ κωνοφόρος καλουμένη καὶ πίτυς ἢ φθειροφόρος.

ὥσαύτως δὲ καὶ τὰ τῶν ἀγρίων· ἴσως δ’ οὐκ ἔχει ταῦτα γε μετάβασιν εἰς τὸ χεῖρον· ἢ γὰρ ἀγριότης ἔσχατον. ἀλλ’ ἡ εὐχυλία καὶ ἡ εὐσαρκία τούτων πρὸς ἄλληλα γίνεται διὰ τὸν ἀέρα καὶ ἀπλῶς τοὺς τόπους. ἐπεὶ καὶ τὰ ἡμέρα εἰς τοῦτο διαφέρει· δύνανται γάρ τινες χῶραι διατηρεῖν τὰς φύσεις, αἱ μὲν μέχρι

τινός, αἱ δ' ἀπλῶς· αἱ δὲ καὶ μεθίσταναι πρὸς τὸ βέλτιον καθάπερ εἴρηται περὶ τε τῶν ἐν Αἰγύπτῳ καὶ ἐν Κιλικίᾳ ῥοῶν· αἱ μὲν γὰρ γλυκεῖαι καὶ οἰνώδεις, αἱ δ' ἀπύρνηοι καὶ καλλίκοκκοι γίνονται περὶ τὸν Πίναρον ποταμόν.

[3] ἀπλῶς δ' ὅταν οἰκείαν χώραν λάβωσιν οἱ καρποὶ μᾶλλον δύνανται τὰ γένη διατηρεῖν ὅταν μάλιστ' εὐσθενῇ καὶ καλλικαρπῇ τὰ δένδρα. ἐν δὲ τοῖς ἐπετείοις σπέρμασι πανταχοῦ πρὸς τὴν χώραν ἡ μεταβολὴ γίνεται πλὴν οὐκ εὐθὺς σπαρέντων, ὀλίγος γὰρ ὁ ἐν τῇ γῇ χρόνος, ἀλλὰ τρίτῳ δὴ ἔτει· τότε γὰρ ἀλλοιοῦται πρὸς τὴν ἐκτελείωσιν ὥσπερ καὶ τὰ ζῶα. καὶ γὰρ ταῦτα τριγωνήσαντα συνεξομοιοῦται· οὐ μὴν ἄλλ' ἐπίδηλόν γέ τι ποιεῖ καὶ ὁ πρῶτος ἐνιαυτός. καὶ τὰ μὲν ἐκ τῶν σπερμάτων χεῖρω διὰ ταύτας τὰς αἰτίας.

[10.1] Ἡ δ' ἐπέτειος βλάστησις, αὕτη γὰρ οἶον δευτέρα γένεσις ἐστίν, οὐχ ἅμα γίνεται πᾶσιν ἀλλὰ παραλλάτει ταῖς ὥραις, ὥστε σχεδὸν ἐν ταῖς ἐναντίας ἐνίων εἶναι καὶ τὰ μὲν θέρους τὰ δὲ χειμῶνος βλαστάνειν. ὁμοίως δὲ καὶ ἡ καρπογονία· καὶ γὰρ αὕτη διέστηκε τοῖς χρόνοις. ὥς μὲν οὖν ἀπλῶς εἰπεῖν, τὰ πρὸς ἐκάστην ὥραν σύμμετρον ἔχοντα τὴν κρᾶσιν ταῦτα καὶ τὰς βλαστήσεις ἐν ἐκάστη καὶ τὰς τελεώσεις τῶν καρπῶν ἀποδίδωσιν.

[2] οὐ μὴν ἀλλὰ δεῖ καὶ τοῖς καθέκαστα πειρᾶσθαι διαιρεῖν· ἓνια μὲν γὰρ εὐβλαστῇ καὶ ἡ βλάστησις δι' ἰσχὺν καὶ πολυτροφίαν ὥσπερ ἀμυγδαλῇ ῥοιά, καὶ ὅλως τὰ ἄγρια μᾶλλον τῶν ἡμέρων· ἓνια δὲ δι' ἀσθένειαν ὥσπερ τὰ ποιῶδη καὶ ἐπέτεια. καὶ γὰρ ἀνθεῖ πολλὰ τούτων κατὰ χειμῶνα καθάπερ καὶ ἡ ἀνεμώνη· φαίνεται δὲ οὐδ' ἡ μηλέα πρωῒανθεῖν δι' ἰσχύν, ἀλλὰ δι' ἄλλην αἰτίαν. ἐκατέρα δ' εὐλόγως πρωῒβλαστεῖ καὶ τὰ ἰσχυρὰ καὶ τὰ ἀσθενῆ· τὰ μὲν γὰρ τῇ δυνάμει καὶ τῷ πλήθει προωθεῖ, τὰ δὲ ὑπὸ μικρῶν εὐκίνητα τῶν κατὰ τὸν ἀέρα.

[3] μέγα δὲ καὶ ὑγρότης καὶ μαλακότης εἰς τὸ προϊέναι ὥσπερ καὶ ἐπὶ τῆς πρώτης φύσεως ἐλέχθη· τὸ γὰρ ξηρὸν καὶ πυκνὸν οὔτ' εὐδίοδον ὁμοίως οὔθ' ὕλης ἔχει πλῆθος. ὅσα δὲ ἐν ταῖς ἐναντίας ὥραις ἐκβλαστάνει τούτων αἰτιῶνται τινες τὴν ψυχρότητα καὶ θερμότητα· τὰ μὲν ἄγρᾳ ψυχρὰ τοῦ θέρους τὰ δὲ θερμὰ τοῦ χειμῶνος βλαστάνειν, ὥστε ἐκατέραν τὴν φύσιν σύμμετρον εἶναι πρὸς ἐκατέραν τῶν ὥρῶν. οὕτω γὰρ οἶεται καὶ Κλειδημος· οὐ κακῶς μὲν οὖν ἴσως οὐδὲ τοῦτο λέγεται, δεῖ δὲ καὶ τὴν ὀλιγότητα καὶ τὴν ἀσθένειαν καὶ εἴ τι ἄλλο συναίτιον προστιθέναι καθάπερ καὶ ἐπὶ τῶν λαχανωδῶν ὀρώμεν.

[4] ἡ μὲν γὰρ ἀνδράχνη καὶ ὁ σίκυος καὶ ὅλως τὰ τοιαῦτα κάθυγρα καὶ ψυχρά· τὸ δ' ὠκιμον ξηρὸν καὶ ξυλῶδες· ἀλλ' ὅμως οὐ δύναται πρὸ τῶν θερμμεριῶν βλαστάνειν εἰς γε διαμονὴν καὶ τελέωσιν· αἴτιον δὲ ἡ ἀσθένεια

καθάπερ καὶ τῆς σικύας καλουμένης. αὕτη μὲν γὰρ δένδρου ὕψος λαμβάνουσα καὶ σχιζομένη τοῖς κλωσὶν ὥσπερ ἡ ἀναδενδράς ὁμως ἐπὶ κηρόν τε καὶ οὐ δύναται πρὸ τῶν θερινῶν ἀλλὰ δεῖται πορρωτέρω τῆς ὥρας παρατείνειν πρὸς τὸ μετόπωρον.

[5] καὶ τὰ ἀκανθώδη καὶ ποιώδη καὶ ῥιζοκέφαλα καθάπερ ὁ τε σκορπίος καλούμενος καὶ τὰ τίφυα καὶ ἡ ἄκανθα βασιλικὴ καὶ τὸ λείριον, ἔνια δὲ καὶ μετ' ἄρκτοῦρον. εἴτε οὖν ὕστερα χρὴ καὶ ὀψιαιτέρα ταῦτα λέγειν, εἴτε καὶ πρωΐαιτερα, γινομένων τῶν πρώτων ὑδάτων, οὐδὲν γὰρ διαφέρει πρὸς γε τὸ νῦν ἀλλ' ἐκεῖνο φανερόν ὡς οὔτε μεγέθει καὶ μικρότητι τὸ πρωΐβλαστὲς καὶ ὀψιβλαστὲς ἀφοριστέον οὐτ' ἴσως θερμότητι καὶ ψυχρότητι καὶ ὑγρότητι καὶ ξηρότητι μόνον, ἀλλὰ δεῖ τινα συμμετρίαν ἕκαστον ἔχειν πρὸς τὴν ὥραν. [γίνεται γὰρ ἀπαλωτάτη.]

[6] φαίνεται γὰρ ἅπαντα τὴν οἰκίαν ἀναμένειν τελέωσιν, ἀβλαστὴ τε τέως καὶ ἀκίνητα ὄντα ὁμοίως δένδρα καὶ ὑλήματα καὶ ποιώδη· φανερώτατον γὰρ τοῦτ' ἐν τοῖς ἀγρίοις ἐν οἷς δὴ καὶ ἡ γένεσις αὐτοφυῆς καὶ ἄνευ παρασκευῆς. πάντα δ' ὡς εἰπεῖν ἡ τὰ γε πλεῖστα τῶν μετοπωρινῶν ἐν τοῖς ὑλήμασι καὶ τοῖς φρυγανικοῖς καὶ ποιώδεσιν ἐστίν· ἐπεὶ δένδρον γε οὐδὲν πλὴν εἰ μὴ τι κατὰ τὴν ἐπιβλάστησιν· ἐπιβλαστάνει γὰρ ἔνια μετ' ἄρκτοῦρον.

[7] ὡς δ' ἐπὶ πᾶν καὶ καθόλου λαβεῖν τὰ ἀειφύλλα τῶν δένδρων καὶ ὀψιβλαστότερα καὶ ὀψικαρπότερα διὰ τε πυκνότητα καὶ ξηρότητα, κατὰ μικρὸν γὰρ ἡ ἐπιρροή, καὶ διὰ τὸ συνεχὲς ἀεὶ τῆς εἰς τὰ φύλλα διδομένης τροφῆς· οὐ γίνεται γὰρ ἀθροισμὸς ὥστε προορμᾶν, ἀλλ' ἀπὸ τῆς ὥρας κινεῖται τῆς οἰκείας τὸ καθῆκον. σπάνια γὰρ ἂν τις λάβοι τὰ πρωΐβλαστὴ καὶ πρωΐκαρπα τῶν ἀειφύλλων οἷον τόν τε κιττὸν καὶ τὴν ράμνον καὶ εἴ τι τοιοῦτον. ἡ δὲ ιδιότης εἴτε διὰ θερμότητα τούτων εἴτε καὶ μανότητα καὶ ὑγρότητα εἴτε καὶ διὰ ταύτας πάσας συμβαίνει τὰς αἰτίας διαιρετέον αὐτὸ τοῦτο πρῶτον ἴσως εἰπόντας ποῖα θερμὰ καὶ ποῖα ψυχρὰ καὶ τοῖς ποίοις ληπτέον. ἀλλὰ περὶ μὲν τούτων ἐν τοῖς ὕστερον πειρατέον εἰπεῖν· διὰ τί δὲ τὰ μὲν πρωΐβλαστὴ, τὰ δὲ ὀψιβλαστὴ ταύτας ἂν τις ἀποδοίῃ τὰς αἰτίας.

[11.1] Ὅσα δὲ κατὰ πᾶσαν ὥραν βλαστάνει τε καὶ ἀνθεῖ καὶ καρποτοκεῖ καθάπερ ἡ περσικὴ μηλέα καὶ εἴ τι ἄλλο τοιοῦτον ἀπορήσειεν ἂν τις οὐ μόνον ὅτι οὐ πρὸς πάσας ἀρμόττει τὰς ὥρας ἢ κρᾶσις, ἀλλ' ὅτι οὐδ' αὐτὰ αὐτοῖς ὁμοβλαστάνει τὰ γένη καὶ ὁμοκαρπεῖ. τοῦτο γὰρ ἐν τοῖς κεχωρισμένοις τῶν ὁμογενῶν ἀξιοῦμεν καὶ ὁρῶμεν συμβαῖνον. τὸ μὲν οὖν πάθος ὁμοιον φαίνεται τοῖς ἐπικυῖσκομένοις ζώοις, πλὴν γ' ἡ αἰτία τοῖς μὲν φανερά, τοῖς δὲ λόγου

δεομένη.

[2] τὰ μὲν γὰρ οὐχ ἅμα λαμβάνουσι τὰς παρ' ἐτέρων ἀρχὰς οὐδ' ἴσως εἰς τὸν αὐτὸν τόπον οὐδ' ἅμα κυΐσκεται, εἰ μὴ καθάπαξ ἅμα καταλάβοι. τῶν δὲ διὰ τί ἡ βλάστησις οὐχ ἅμα, οὐ ράδιον εἰπεῖν· ἀνάγκη γὰρ διὰ τὸ τὰς ρίζας μὴδ' ἅμα μὴδ' ὁμοίως ἔχειν ἢ τοὺς ἀκρεμόνας μὴ δέχεσθαι μὴδ' ἐκπέττειν ἐξ ὧν ἡ πρώτη βλάστησις. ταῦτα δὲ διὰ τί καὶ τίνος ἔνεκα γένοιτ' ἂν, οὐκ εὐλογον εἰπεῖν.

[3] ἡ μὲν γὰρ ἄμπελος ἡ μαινομένη τάχ' ἂν δόξειεν οὐκ ἀλόγως δέχεσθαι· τῷ μὲν γὰρ μὴ ἐκπέττειν τὸν καρπὸν ὑπολείμματα πολλὰ ποιεῖται ὑγρότητος γονίμου. ταῦτα δ' ὅταν ἀῆρ ἐπιλάβῃ μαλακὸς ἐκτίκτει, καθάπερ καὶ ἄλλοις τῶν δένδρων αἱ πορρώτεραι βλαστήσεις ἐπιγίνονται. ἡ δὲ μηλέα καὶ ὅσα ἄλλα τοιαῦτα τελεογονεῖ καὶ ἐκπέττει· διὸ τὸ μερίζεσθαι «καὶ» ἄλλοτ' ἄλλο βλαστάνειν ἄτοπον καὶ ταῦτ' ἀπὸ μιᾶς ὁρμῆς. αἱ μὲν οὖν ἀπορίαι σχεδὸν αὗται καὶ τοιαῦται εἴρηνται περὶ τούτων.

[4] πρὸς δὲ τὸ τὴν αἰτίαν τοῖς ἀπορουμένοις λέγειν πρῶτον ληπτέον ὅπερ εἴρηται καὶ πρότερον ὅτι πᾶν δένδρον ἀρχὰς πολλὰς ἔχει πρὸς τὴν βλάστησιν καὶ καρποτοκίαν· τοῦτο δ' ὥσπερ ἐλέχθη τῆς οὐσίας ὅτι καὶ πολλαχόθεν ζῇ διὸ καὶ βλασθητικόν. εἰσὶ δ' οἱ πρῶτοι τούτων ἀναγκαιότεροι, ἐκ τῶν ἀρχῶν δὲ τούτων οὐθ' ὅμοιοι πάντες οὐθ' ἴσοι οὐθ' ἅμα βλαστάνουσιν οἱ βλαστοί, ἀλλ' ὅταν ἡ πλείων συρροὴ καὶ ἰσχυροτέρα κατὰ ταῦτα θάπτον καὶ πλείων· ἕκαστος γὰρ αὐτῶν ὥσπερ φυτὸν ἐστὶν ἐν τῷ δένδρῳ καθάπερ ἐν τῇ γῇ· μὴ ἅμα δὲ τῆς βλαστήσεως οὔσης μὴδ' ἴσης τῆς ἰσχύος εὐλόγως οὐδὲ τῶν καρπῶν ἡ πέψις ἅμα γίνεται πάντων.

[5] ἐπεὶ καὶ ἡ θέσις διαφορὰν ποιήσει τῶν μέρων οἷον ἡ πρὸς ἀνατολὰς ἢ δύσεις ἢ πρὸς ἄρκτον ἢ μεσημβρίαν· ὥσπερ γοῦν καὶ ὅλων τῶν δένδρων εἰ ἐν εὐδιεινῷ τόπῳ· πρωῒβλαστῇ γὰρ ταῦτα καὶ πρωῒκαρπα. τοιαύτης δὲ τῆς φύσεως οὔσης τῆς κοινῆς ὅπου μὲν ὁ ἀῆρ μαλακὸς καὶ εὐδιεινὸς ὀλίγον χρόνον «οὐ» βλασθητικὰ τὰ δένδρα γίνεται καθάπερ καὶ περὶ Αἴγυπτον, ὅπου δὲ χειμέριος καὶ σκληρὸς πλείω.

[6] τὸ γὰρ ὅλον βραχεῖα τις ἂν γένοιτο διάλειψις εἰ ἢ ἐκ τῆς γῆς τροφὴ δαψιλῆς εἴη καὶ ὁ ἀῆρ εὐκραής. ἐπεὶ καὶ τὰ μὴ φυλλορροοῦντα παρὰ τισιν οἷον συκῇ καὶ ἄμπελος διὰ τοῦτο οὐ φυλλορροεῖ καθάπερ εἴρηται δι' ὅτι διαρκῆς ἡ τροφή· τουτὶ μὲν οὖν κοινὸν ἐπὶ πλείονων ἐστὶ· τὰ μὲν γὰρ διὰ τὴν φύσιν, τὰ δὲ διὰ τὸν τόπον ἔχει τοιαύτην. διηρημένων δὲ τῶν μὲν φυλλοβόλων, τῶν δὲ ἀειφύλλων αἰτίας δ' οὔσης τοῖς ἀειφύλλοις τῆς

διαρκεΐας τῆς τροφῆς, ὧν τὰ μὲν διὰ τὴν ἰδίαν φύσιν, τὰ δὲ διὰ τὸν τόπον τοιαῦτα.

τρίτον δὴ καὶ ὥσπερ ἐφεξῆς τούτοις τὴν ἀειβλάστησιν θετέον, ὅτι τὸ ἀειφυλλὸν οὐκ ἀειβλαστές. ἀλλ' ἐκεῖνα μὲν ὥσπερ διατηρεῖν μόνον δύνανται τὰ προϋπάρχοντα ταῦτα δὲ καὶ προσεπιγεννᾶν ἕτερα διὰ τὴν ἰδίαν δῆλον ὅτι φύσιν· τοῦτο δὲ καὶ ἐν ἄλλοις μέχρι τινός.

[7] ἐπιβλαστάνει μὲν γὰρ τὰ μὲν ἅμα τοῖς ἄστροις, τὰ δὲ καὶ ἀορίστως ὥσπερ καὶ ἄμπελος. ὁ δὴ τούτοις μέχρι τινός «ἐκείνοις» δι' ὅλου δέδωκεν ἡ φύσις ὥστ' ἀεὶ βλαστοφυεῖν καὶ καρπογονεῖν. οὕσης δὲ τοιαύτης τῆς οὐσίας οὐδὲν ἄτοπον ἦδη τὰ μὲν τελεοῦν, τὰ δ' ἀνθεῖν, τὰ δὲ βλαστάνειν, τὰ δὲ μέλλειν· ἐπεὶπερ οὐδ' ἐν τοῖς ἄλλοις δένδροις ἅπανθ' ἅμα τὰ μέρη διαφέρει δὲ τοῖς χρόνοις ὅτι τὰ μὲν ἄλλα παρ' ὀλίγον, τὰ δ' ἐφεξῆς.

[8] ἀλλ' ἐκεῖνο μᾶλλον ζητητέον τίς ἢ πόθεν ἡ κρᾶσις καὶ ἡ σύστασις τῶν τοιούτων· ὅμοιος δὲ παραπλήσιον πλὴν χαλεπώτερον καὶ τίς ἢ τῶν ἀειφυλλῶν· προσεπειπεῖν γὰρ δεῖ καὶ διὰ τί τοσαύτην λαμβάνει καὶ δύναται πέττειν ὥστε γεννᾶν. ἡ γὰρ ἐπιβλάστησις καρποτοκίας ἕνεκα· ἐπεὶ τό γε πλείους ἅμα καρποὺς ἔχειν τὸν μὲν τέλειον, τὸν δ' ἀτελεῖ, τὸν δ' ὑποφυόμενον. συμβαίνει καὶ τῇ ἀρκευθῇ καὶ ἄλλοις ὧν βραδεῖα τε ἡ ἔκπεψις καὶ δυσαπόπτωτος ὁ καρπός. ἡ μὲν οὖν τούτων αἰτία μέχρι τούτων εἰρήσθω τὰ νῦν.

[12.1] Πότερα δ' ἡ βλάστησις καὶ αὐξησις ἅμα τῶν ἄνω τε γίνεται καὶ τῶν ὑπὸ γῆς ἢ διηρημέναι τοῖς χρόνοις· ὥσπερ τινές φασι τὰς μὲν ρίζας αὐξάνεσθαι μετοπώρου καὶ χειμῶνος, τὰ δὲ στελέχη καὶ τοὺς ἀκρεμόνας ἔαρος καὶ θέρους καὶ μάλισθ' ὑπὸ τὸ ἄστρον. τοῦτο δὲ κατὰ λόγον οὕτω συμβαίνειν, τῇ γὰρ πρώτῃ γενέσει κατακολουθεῖν· ἐν ἐκείνῃ γὰρ τὴν ρίζαν πρότερον ἢ τὸν βλαστὸν ἀφιέναι πάντα· προϋπάρχειν γὰρ ἀναγκαῖον, ὃ τὴν τροφήν ἐπάξεται.

[2] φανερόν δὲ καὶ ἐν ταῖς μετοπωριναῖς φυτεῖαις· τότε γὰρ ρίζοῦται οὐ βλαστάνει δὲ τὰ φυτευόμενα ἢ ἐπὶ βραχύ τι πρὸ τοῦ ἔαρος· εἰ γὰρ ἦν ἄρριζα, ἐσῆπτε' ἄν. ἀλλὰ διὰ τοῦτο ἐπαινοῦσι ταύτην τὴν φυτείαν, ὅτι μᾶλλον τὰς ἀρχὰς ἰσχυροτέρας ποιεῖ δι' ὧν καὶ ἡ τοῦ στελέχους καὶ ἡ τῶν ἄλλων γένεσις· ὥς τὰ γ' εὐθὺς ἀνατρέχοντα πρὸς τὴν βλάστησιν ἀσθενῇ καὶ ἄκαρπα γίνεται, καθάπερ ἐπὶ τῶν σπερμάτων οἱ Ἀδώνιδος κῆποι.

[3] πιθανὸς δὲ καὶ ταύτῃ δόξειεν ἄν· ὁ λόγος ὅτι τὰ μὲν ἄνω κωλύεται διὰ τὸν πέριξ ἀέρα ψυχρὸν ὄντα, τὰ δὲ κάτω στεγαζόμενα τῇ γῇ καὶ ἅμα συγκατακλειόμενα ὑπὸ τοῦ θερμοῦ διὰ τὴν ἀντιπερίστασιν τῇ τε ὑγρότητι καὶ

τροφῇ προσαύξεται. πάντα γὰρ αὐτοῖς ὑπάρχει δι' ὧν ἡ αὐξησις καὶ ἡ γένεσις. σημεῖον δὲ καὶ τὸ ἐπὶ τοῦ σίτου συμβαῖνον, ὃς ὑπὸ τοῦ χειμῶνος πιλούμενος ῥίζοῦται μᾶλλον, ὃ δὴ καρκινοῦσθαι λέγουσιν, ὡς τὴν ἀπὸ τῶν ἄνω δύναιμι καὶ τροφήν εἰς τὰ κάτω τρεπομένην.

[4] ταύτῃ μὲν οὖν δόξειεν ἂν μερίζεσθαι τὸ τῆς αὐξήσεως· τῇδε δὲ πάλιν οὐκ ἂν δόξειεν, ἔν τε γὰρ τῇ πρώτῃ γενέσει προτερεῖ μὲν ἡ ῥίζα τῶν βλαστῶν οὐ μὴν τοσοῦτον ὥστε χρόνου γίνεσθαι πληθος, ἀλλὰ βραχὺ τι πάντως ὥσπερ καὶ ἐπὶ τῶν ζώων ἡ καρδία καὶ τὸ περὶ τὴν καρδίαν· ἀπλῶς γὰρ ὡς εἶπεῖν ἡ φύσις οὐθὲν καθάπερ ἡ τέχνη ποιεῖ κατὰ μέρος, ἀλλὰ πάντ' ἀθρόα καταβάλλεται. συντελεῖ δὲ ἐτέρων ἕτερα πρότερον. εἰ δὲ καὶ ἐν τῇ πρώτῃ γενέσει τοῦτ' ἐπὶ τινων ἀναγκαῖόν ἐστιν, ἀλλ' οὐτι γε ἐν τῇ τροφῇ καὶ αὐξήσει, τὰ μὲν πρότερον τρέφεσθαι, τὰ δ' ὕστερον, ὥσπερ οὐδ' ἐπὶ τῶν ζώων, ἀλλ' ἅμα πως μάλιστα πάντα καὶ ὁ ὅλος ὄγκος ὥσπερ κατὰ συνέχειαν καὶ τρέφεται καὶ ἐπιδίδωσιν. ὃ καὶ κατὰ τὴν αὐξησίαν ἐστὶ φανερόν.

[5] ἐπεὶ καὶ ἄτοπον εἰ τὸ θρεπτικόν, ὃ δὴ διαπλάττει καὶ δίδωσι τροφάς, διαιρεῖται κατὰ μέρη τὴν ἐνέργειαν· ἢ πάλιν εἴ τι τῶν σωματικῶν τὸ ἐνεργοῦν οἷον πνεῦμα ἢ πῦρ· οὐδὲ γὰρ ταῦτα εἰκός, ἀλλ' ὅταν ἅμα ταῖς ὥραις κινηθῶσιν ὁμοίως δι' ὅλων διήκειν τῶν φυτῶν· ἐν γάρ τι τὸ γεννῶν, οὐχ ὥσπερ Ἐμπεδοκλῆς διαιρεῖ καὶ μερίζει τὴν μὲν γῆν εἰς τὰς ῥίζας, τὸν δ' αἰθέρα εἰς τοὺς βλαστοὺς ὡς ἐκάτερον ἐκατέρου χωριζόμενον, ἀλλ' ἐκ μιᾶς ὕλης καὶ ὑφ' ἐνὸς αἰτίου γεννῶντος. ὡς ἡ τῶν ὅλων σύστασις μικρὰν ἀεὶ τινα λαμβάνει ἔφεξιν καὶ κατὰ τὰς τροφὰς καὶ κατὰ τὰς αὐξήσεις. ὥστε δ' ὅλαις ὥραις χωρίζειν μέγα κομιδὴ τὸ διάστημα τῶν χρόνων.

[6] ἡ δ' ὑπὸ τοῦ ψύχους κώλυσις τῆς βλαστήσεως ἀληθὴς μὲν οὐκ ἔτι δὲ ποιεῖ μερισμὸν φυσικόν. ἀλλ' ὥσπερ ἐν συμβαίνοντι τὸ προσαύξεσθαι τὰς ῥίζας· ὃ καὶ καθηκούσης ἐνιότη γε γίνεται τῆς ὥρας ὅταν ἀντικόψῃ ὁ χειμῶν· ἢ μὲν γὰρ βλάστησις κατέχεται, τὰ δὲ τῶν ῥιζῶν οὐ κωλύεται διὰ τὴν ἀλέαν, ὅταν ἤδη προορμώμεναι τύχωσιν εἰς ἔκφυσιν καὶ αὐξησιν ἔρχεσθαι. ἀλλὰ τοῦτο οὐ τῆς φύσεως θετέον ὃ διακωλύειν ποτὲ συμβαίνει τι τῶν ἐκτός, ἀλλ' ὅσα τῇ ὁρμῇ γίνεται τῇ αὐτῇ.

[7] ὥραιων δὲ χειμῶνων καὶ εὐδαινῶν γενομένων ἅμα τὰ τε ἄνω καὶ τὰ κάτω λαμβάνει τὰς αὐξήσεις. ἐπεὶ ὅπου <ὁ> ἀῆρ εὐβλαστής καὶ μαλακὸς βραχύν τινα χρόνον ὥσπερ εἴρηται διαλείπουσιν αἱ βλαστήσεις οὐ μεριζομένων τοὺς χρόνους. τοὺς δὲ χειμῶνας οὐ μόνον τὰς βλάστας, ἀλλὰ καὶ τὰς ῥίζας εὐλογον κατέχειν εἴπερ ἀπὸ τῆς τοῦ ἡλίου θερμότητος καὶ αἱ τούτων

αὐξήσεις καὶ γενέσεις οὐκ εἰς πλεῖον καταλαμβάνουσαι βάθους οὐ ὁ ἥλιος ἐφικνεῖται· πλὴν ἐάν που τόπος εὐδίοδος ἦ καὶ μανὸς καὶ κενός. μὴ γὰρ τούτου συμβαίνοντος ἀπορήσειεν ἂν τις εὐλόγως, διὰ τί ποτ' οὐκ αὐξάνονται τοῦ χειμῶνος τροφήν τε λαμβάνοντα καὶ ἀποστεγόντος τοῦ ψύχους. τάχα δὲ καὶ τοῦτο κοινὸν ἀπόρημα καὶ ἐπὶ τῶν ἄλλων μερῶν.

[8] ἅπαν μὲν γὰρ τὸ ζῶν τρέφεται, τὸ δ' ἐν ὁρμῇ τῆς αὐξήσεως ὄν [οὐκ] αὖξεται· τὰ δὲ φυτὰ πανταχῇ καὶ τὰ νέα καὶ τὰ παλαιὰ προορμᾷ πρὸς αὖξησιν. εἰ μὴ ἄρα συμβαίνει τότε μὲν αὐξάνεσθαι τοὺς ὅλος ὄγκους ἅμα δὲ τῇ ὥρᾳ διαγελῶση τὰς ἐκβλαστήσεις γίνεσθαι· τοῦτο δὲ οἷον γένεσις τις ἦδη· διὸ καὶ οὐκ ἄλογον ἐν αὐτοῖς ὥσπερ κύοντα κατέχειν ἢ συναθροίζοντα καὶ λαμβάνοντα πρὸς τὴν κύησιν ἐν οἷς ὄγκος γίνεται καὶ αὖξησις, εἴθ' ἅμα ταῖς ὥραις ἀποτίκτουσιν.

[9] ἔχουσι γὰρ δὴ τινες οἱ κλάδοι καὶ οἱ ἀκρεμόνες ἐν ἑαυτοῖς ἀρχὰς ζωτικὰς, αἱ διαθερμαινόμεναι τῇ ὥρᾳ προίενται τοὺς βλαστοὺς καὶ μὴ ῥιζουμένων τῶν κάτω· τοῦτο δὲ μάλιστα φανερόν ἐν τοῖς ἀφαιρουμένοις φυτοῖς τῶν ἀμπέλων τε καὶ ἐτέρων καὶ συντιθεμένοις ἐν πίθοις· προβλαστάνουσι γὰρ οἱ βλαστοὶ τῆς ὥρας καθηκούσης· ὅτε δὲ καὶ τὰ πηγνύμενα κλήματα καὶ κράδαι καὶ χαράκες ἐκ τῶν ἄνωθεν ἐβλάστησαν ὅσον εἰς ἀρχὴν, κάτωθεν δὲ οὐκ ἐρριζώθησαν, ὥς ἔχοντα μὲν ἐν ἑαυτοῖς ἦδη τὰς ἀρχὰς καὶ τὰς δυνάμεις, τροφῆς δὲ δεόμενα μετὰ τὸν τόκον ἥς μὴ γινομένης καταξηραίνεται.

[10] διὸ καὶ οὐκ εἰκόασιν κακῶς λέγειν οἱ φάσκοντες εὐθὺς ἀνθεῖν τοὺς νέους καρποὺς ἔτι τῶν ἐτέρων ἐπόντων· τοῦτο γὰρ δῆλον ὥς δυνάμει λέγουσιν. τὰς μὲν οὖν αὐξήσεις εἴη μὲν ἂν ἀμφοτέρως συμβαίνειν, οὐ μὴν ἀλλὰ διὰ ταῦτά γε μᾶλλον ἂν τις ὅλων τῶν δένδρων <ἡ> μεριζομένας ὑπολαμβάνοι γίνεσθαι.

[13.1] Ζητήσῃε δ' ἂν τις ἐκ τῶν μικρῶ πρότερον εἰρημένων πότερον τὰ δένδρα κατὰ χειμῶνα κύει πρὸς καρπογονίαν, τοῦ δ' ἥρος ἀποτίκτει καὶ τοῦθ' οἷον περίοδος ἐστὶ χρόνους ὠρισμένοις καθάπερ τοῖς ζώοις ἢ διὰ τὴν ἔνδειαν τῆς τροφῆς συμβαίνει καὶ διὰ τὴν ψυχρότητα τοῦ ἀέρος. εἰ γὰρ ἐν τοῖς εὐδιδεινοῖς καὶ μαλακοῖς ἀεὶ βλαστάνουσιν, οὐκ ἂν εἴη τεταγμένη [ἐν] τοῖς χρόνοις ἢ κύησις, εἰ δὲ μὴ οὕτι γε ταύταις ταῖς ὥραις ὥς ὅλον ἅμα βλαστάνειν πάλιν καὶ εἴ τι τὸ ὀργῶν ἀποτίκτειν.

[2] εἰ δὲ καὶ συνεχῶς ὁ ἀήρ ἀκολουθοίη τούτοις ἴσως οὐδὲ τὰ παρὰ τῶν ποιητῶν λεγόμενα δόξειεν ἂν ἀλόγως ἔχειν οὐδ' ὥς Ἐμπεδοκλῆς ἀείφυλλα

καὶ ἐμπεδόκαρπά φησι θάλλειν “καρπῶν ἀφθονίησι κατ’ ἡέρα πάντ’ ἐνιαυτόν,” ὑποτιθέμενός τινα τοῦ ἀέρος κρᾶσιν τὴν ἡρινὴν κοινήν· ἐκεῖνο δ’ ἂν τις ἴσως ἐν τούτοις ἀπορήσειε πότερα καὶ πεπάνσεις ὅμοιαι τῶν καρπῶν ἢ ἐνδεέστεραι γίνονται ἀσθενεστεροῦ ὄντος τοῦ θερμοῦ καὶ τῆς ὥρας ὑγροτέρας. τοῦτο μὲν οὖν ὥς καθ’ ὑπόθεσιν θεωρεῖσθω.

[3] ἐν δὲ τῇ νῦν περιόδῳ τῶν ὥρων ἔοικε τὰ δένδρα κενωθέντα τοῦ θέρους ἐκ τῆς βλαστήσεως καὶ τῆς καρπογονίας ἀντιπληροῦσθαι πάλιν εἴτ’ ἐκ ταύτης τῆς ἀντιπεριστάσεως ἀποτίκτειν καὶ βλαστάνειν κατὰ τοὺς ἰκνουμένους καιρούς, ἔχοντά πως τὴν κύησιν καὶ ἐν τοῖς μέρεσι καὶ ἐν τοῖς ὅλοις. εὐλόγως δὲ καὶ αἱ φυτεῖαι καὶ αἱ ἐπιβλαστήσεις γίνονται κατὰ πλείους ὥρας, δοκοῦσι δ’ ἐναντία πως εἶναι μετόπωρόν τε καὶ ἔαρ καὶ κυνὸς ἐπιτολή· ἡ γὰρ περὶ τροπᾶς βραχεῖα, ἀλλὰ μετ’ ἄρκτοῦρον ἐπιβλαστάνει πλείω καὶ ὑπὸ κύνα.

[4] τὸ μὲν οὖν ἔαρ οὐδὲ θαυμάζεται, ζωτικωτάτη γὰρ ἡ ὥρα καὶ μάλιστα γόνιμος, ὑγρά τις οὖσα καὶ θερμή. τὸ δὲ θέρος ὥσπερ ἐναντίον· ξηρά τε γὰρ καὶ ἐμπυρωτάτη καὶ μάλιστα ὑπὸ τὸ ἄστρον. ἔτι δὲ τὸ μετόπωρον οὐ μόνον ξηρόν, ἀλλὰ καὶ ψυχρόν ἤδη μεταβάλλον ἐπιλαμβανούσης τῆς ὥρας· ἐναντιωτάτη δὲ βλαστήσει ψυχρότης καὶ ξηρότης. ἀλογία μὲν γὰρ δὴ τις φαίνεται διὰ τούτων. οὐ μὴν οὔτε πρὸς τὰς βλαστήσεις ἐναντία ταῦτά ἐστιν οὔτε αὖ ἀσύμφωνα κατὰ τὰς δυνάμεις ἀλλ’ ἔχοντά τινα ὁμοιότητα.

[5] δεῖ γὰρ δὴ τὴν ὥραν ὑγρότητά τινα καὶ θερμότητα ἔχειν ὥσπερ καὶ τὸ ἔαρ. αὕτη μὲν ὁμολογουμένη μάλιστα πρὸς βλάστησιν.

ἐν ἀμφοῖν δὲ τοῦτο συμβαίνει καὶ ἐν τῇ τοῦ κυνὸς ἐπιτολῇ καὶ μετ’ ἄρκτοῦρον· ὑπὸ γὰρ αὐτὸ τὸ ἄστρον καίπερ ὄντος ἐμπύρου τοῦ ἀέρος ὅμως καὶ νότια πνεῖ καὶ νέφη συνίσταται καὶ αὐτὰ τὰ δένδρα διωγραίνεται φανερώς καὶ ὑπὸ τὸν φλοιὸν αὐτῶν διαδίδοται τις ὑγρότης, ὅθεν καὶ ῥοαὶ τισι κατὰ τοῦτον τὸν καιρὸν εἴτ’ οὖν συνελαυνομένου τοῦ ὑγροῦ καὶ ἀντιπεριστάσεως γινομένης εἴτε δι’ ἄλλην αἰτίαν.

[6] πλὴν συμβαίνει γε τοῦτο καὶ τοῖς ἀνθρώποις, διὸ καὶ αἱ κοιλίαι μάλιστα λύονται καὶ πυρετοὶ πολλοὶ γίνονται καθυγγραυομένων τῶν σωμάτων. δοκεῖ δὲ καὶ ἡ γῆ τότε καθυγρᾶνθαι μᾶλλον ὅθεν καὶ ὑδάτων ἀναδόσεις καὶ ἕτεραι μεταβολαὶ γίνονται πλείους. ἀλλὰ δι’ ἣν μὲν αἰτίαν ἕκαστα συμβαίνει τούτων ἕτερος λόγος· ὅτι δὲ ἐξυγγραυομένων τῶν φυτῶν καὶ τοῦ ἔξωθεν ἀέρος οὐκ ἀντιπίπτοντος ἢ ἐπιβλάστησις οὐκ ἄλογος φανερόν ἐκ τῶν εἰρημένων.

[7] τὸ δὲ μετόπωρον οὐχ ὥσπερ ἐλέχθη ξηρόν καὶ ψυχρόν ἐστιν, ἀλλὰ μᾶλλον θερμόν· ἅμα γὰρ ἐν τῇ τοῦ ἄστρου μεταβολῇ ἐν τῷ ἀέρι γίνεται, διὸ

καὶ ὥσπερ μίξιν τινὰ συμβαίνει γίνεσθαι τοῦ ὑγροῦ καὶ τοῦ θερμοῦ καθάπερ καὶ ἐν τῇ ἡρι προσγίνεται τὸ θερμὸν ἀπὸ τῆς ὥρας. ἐνταῦθα δὲ τοῦ θερμοῦ προϋπάρχοντος ὑγρότης ἐπιγίνεται διὰ τὴν πύκνωσιν καὶ κατάψυξιν τοῦ ἀέρος.

[8] εὐλογον δὲ καὶ τὰ μὴ κάρπιμα καὶ ὅλως τὰ νέα τῶν πρεσβυτέρων ἐπιβλαστικώτερα, καὶ τὰ ἐν ταῖς ὑγραῖς καὶ χειμερίοις χώραις. τὰ μὲν γὰρ κάρπιμα καὶ πρεσβύτερα ξηρότερα, τὰ μὲν εἰς τοὺς καρποὺς κατανηλωκότα, τὰ δὲ καὶ τῇ φύσει τοιαῦτα. τὰ δὲ ἄκαρπα καὶ νέα καὶ ὑγρότητα ἔχει καὶ θερμότητα πλείω. πάλιν δὲ ὅπου μὲν οἱ τόποι χειμέριοι καὶ ὑγροὶ τυγχάνουσι καὶ ὁ ἀὴρ εὐπνους ἐνταῦθα καὶ τὰ μετοπωρινὰ γίνεται μακρὰ καὶ ὑγρὰ καὶ καλὰ. πολλάκις δὲ καὶ ὕδατα θερινὰ κατὰ γε τὰς πλείστας, ὥσθ' ὑγροῦ τοῦ ἀέρος ὄντος ἐπιγινομένης θέρμης εὐβλαστότερα γίνεται καὶ εὐαυξὴ μᾶλλον·

[9] ἐπεὶ καὶ τὰ δοκοῦντα δικαρπεῖν μηλεῶν τέ τινα γένη καὶ ἀπίων ἐν τούτοις μάλιστα γίνεται τοῖς τόποις ἅτε παρεκτεινούσης ἐπὶ πολὺ τῆς ὥρας. καὶ ταχὺ τῶν προτέρων ἀφαιρουμένων· ἃ μὴ πρωϊκαρπεῖ ὅμως διφορεῖ. θάπτον γὰρ πάλιν ἀναπληροῦνται «καὶ κυΐσκονται», διὸ καὶ χρῶνταί τινες αὐτῷ τῶν πρὸς τὴν ἀγορὰν βλεπόντων. οὐ μὴν ἀλλ' οὐδέν γε ὥς εἰπεῖν τῶν δικαρπούντων ὅμοιον γίνεται τοῖς ἐξ ἀρχῆς ἀλλ' ὥς ὀρμὴν μόνον τοῦ φυτοῦ λαμβάνοντος, οὐ συνεκτελέσαντος δὲ τοῦ ἡλίου καὶ τοῦ ἀέρος.

[10] καὶ ἐφ' ἐτέρων ἔτι μᾶλλον συμβαίνει· προφαίνει γὰρ καρπὸν καὶ ἡ ρόα καὶ ἡ μύρρινος ἀλλὰ μέχρι τοῦ προδεῖξαι μόνον. ἐπιβλαστικώτατα δ' οὖν ὥς εἰπεῖν τὰ μάλιστα εὐβλαστῇ τῇ φύσει, πλὴν εἴ τι διὰ ξηρότητα κατακωλύεται καθάπερ ἡ ἀμυγδαλὴ καὶ εἴ τινων ὑπόγειος ἡ ἀφαίρεσις τῶν καρπῶν πρὸς τῆς ὥρας ἐπιβλάστησιν.

[11] ἐὰν οὖν μακρὸν γίνηται τὸ μετόπωρον οὐκ ἄλογον καὶ ρόδα γίνεσθαι καὶ ἄλλ' ἅττα τῶν τοιούτων ὥσπερ καὶ περὶ Δίον φασι τῆς Μακεδονίας οὐκ ἰσχυρὰς γε δεόμενα τῆς πέψεως χρόνον δὲ λαβόντα ἱκανὸν ἐξέφηγε τὸ ἄνθος. ὅλως δὲ ὁ πλεονάκις εἴρηται μαλακοῦ καὶ ὑγροῦ τοῦ ἀέρος καὶ τὸ σύνολον εὐκράτου ἀεὶ δύνατον βλαστάνειν οὐ πάντα, ἀλλ' ἓνια τῶν δένδρων τὰ δ' ἐλάττω τούτων ἔτι μᾶλλον. ὁ καὶ νῦν ἐπὶ τινων στεφανωμάτων συμβαίνει τόπους ἐχόντων εὐσκεπεῖς καὶ προσεῖλους.

[12] διατελεῖν γὰρ ἀνθοῦντα δοκεῖ καὶ ἡ οἰνάνθη καὶ τὸ ἶον τὸ μέλαν καὶ ἄλλ' ἅττα, θεραπείας δέ τινος προσγενομένης ἔτι μᾶλλον. ὅτι δὲ μεγάλην ῥοπὴν ὁ τόπος παρέχεται πρόσειλος ὢν καὶ εὐσκεπὴς καὶ αὐτὰ τὰ δένδρα μαρτυρεῖ· φύεται γὰρ ἐν τούτοις ἓνια κατὰ τὴν ἄλλην χώραν οὐ φυόμενα καὶ

καρποφορεῖ τῶν ἄλλων οὐ φερόντων καὶ προανθεῖ καὶ προβλαστάνει πρότερον τῶν λοιπῶν. ὑπὲρ μὲν οὖν τούτων ἱκανῶς εἰρήσθω.

[14.1] Τὸ δ' ἐπὶ τῶν διαφορούντων δένδρων ὁμοίον τινα τρόπον ἐστὶ τῷ ἐπὶ τῶν προβάτων γινομένῳ· ἐκεῖνα γὰρ εὐτοκῆσαντα καὶ εὐγονοῦντα πάλιν ὁρμᾷ πρὸς κύησιν ἐκποιούσης ἔτι τῆς ὥρας. καὶ τὰ δένδρα παραιρεθέντων τῶν πρώτων καρπῶν γονεῦει πάλιν ἐτέρους, δεῖται δ' ἴσως χώρας τε εὐτρόφου τὰ τοιαῦτα τῆς τε θεραπείας πλείονος [ἢ] ἄμφοιν καὶ μάλισθ' ὥς εἰπεῖν τῆς τοῦ ἀέρος κράσεως ὅπως λάβῃ χρόνον ἱκανὸν εἰς τὴν κύησιν.

[2] διὰ τοῦτο γὰρ οὐδ' ἐάν τις ἀφέλῃ τὸν καρπὸν ἢ ἄνθος, δύναται πάλιν ἕτερα γεννᾶν διὰ τὸ μὴ λαμβάνειν τὸν τῆς κυήσεως χρόνον· οὐ γὰρ οἷόν τε ἄνευ τοῦ κυῆσαι γεννᾶν ἐξανηλωμένου τοῦ προϋπάρχοντος. ἅμα δὲ ὥσπερ πηροῦσθαι συμβαίνει τὴν ἀρχὴν διὰ τὴν ἔλκωσιν, ὥστε βλαστάνειν ἀπὸ τούτου μὴ καινῆς ἄλλης γινομένης οὐκ ἐκποιεῖ τὸ τῆς ὥρας· τούτων μὲν οὖν οὕτως ταύτας ὑποληπτέον τὰς αἰτίας.

[3] αἱ δὲ πεπάνσεις τῶν καρπῶν οὐ κατὰ τὰς βλαστήσεις γίνονται· βλαστάνει γὰρ τὰ γε πολλὰ σύνεγγυς αὐτοῖς κατὰ μίαν ὥς εἰπεῖν ὥραν· τοῦ δὲ πεπαίνειν τοὺς καρποὺς πολλοῖς χρόνοις ὕστερον ἐκείνην τὴν αἰτίαν ὑποληπτέον, ὅτι «τὰ» μὲν τῶν φύλλων καὶ βλαστῶν εὐκινητότερα καὶ ῥάονα σωματικωτέραν ἔχοντα καὶ περιττωματικὴν τὴν ὕλην, οἱ δὲ καρποὶ καθαρωτέραν καὶ μάλιστα δὴ τῶν χυλῶν αὐτῶν· αὕτη δ' ἡ τῶν καρπῶν πέπανσις εἰς ἣν πλείονος δεῖται καὶ δυνάμεως καὶ κατεργασίας.

[4] ἔτι δὲ μεγάλας εὐθὺς διαφορὰς ἔχουσιν οἱ καρποὶ τῷ ξυλῳδεῖς ἢ γεῳδεῖς ἢ ξηροὶ ἢ λιπαροὶ τὴν φύσιν εἶναι. δυσκατεργαστότεροι γὰρ οἱ τοιοῦτοι διὸ καὶ προανθοῦντα ἔνια τὸν καρπὸν ἔχει πολὺν χρόνον ὥσπερ ἀμυγδαλῇ. δυσκατάπεπτος γὰρ ὁ ξυλῳδης· τὸ δ' ἄνθος ὠθεῖ διὰ τὴν πρότερον λεχθεῖσαν αἰτίαν, εἴπερ βούλονται πάντα ταῦτα συμμετρίαν τινὰ ἔχειν καὶ τάξιν. ἀλλὰ καὶ αὐτῶν τῶν ἀνθῶν ὅσα μετὰ σωματικῶν ὄγκων, ὀψιαίτερόν τι γίνεται καθάπερ τὸ τῆς ρόας· ἐν γὰρ τῷ κυτίνῳ τὸ ἄνθος·

[15] Τὰ δ' ἀργὰ τῶν εἰργασμένων πρωῒβλαστότερα καθάπερ ἄμπελος, μηλέα, ἐλάα, συκῇ, τὰ ἄλλα, διὰ τὸ κατέχειν ἔνια τὴν θερμότητα μᾶλλον μὴ ἀνασκαπτομένης τῆς γῆς μηδὲ γυμνουμένων τῶν ῥιζῶν· αὕτη γὰρ ἡ κινουσα· καὶ διὰ τὸ μηδεμίαν ἐν τοῖς ἄνω γίνεσθαι πληγὴν κλωμένων ἢ καρφολογουμένων· ἀφελκούμενα γὰρ πόνον τε παρέχει καὶ καταψύχει καὶ εἰς ὀλίγον συστέλλει. τοῖς δὲ πολλοῖς διαδίδοται κατὰ μικρά, διὸ ταῦτα ταῖς ὥραις ὑπακούει, καὶ ἔτι δὴ καὶ μάλισθ' ὥς εἰπεῖν διὰ τὸ ἀκλάστων ὄντων καὶ

ἀκαθάρτων ἐν πολλοῖς εἶναι καὶ κατὰ μικρὰ τὰς γονίμους ἀρχάς, ὧν ἕκαστον διὰ τὴν ὀλιγότητα καὶ σμικρᾶς δεῖται κινήσεως καὶ εὐθὺς ποιεῖται τὰς ἐκβλαστήσεις· ὁ καὶ ἐπὶ τῶν ἀπίων ζυμβαίνει.

[5] καὶ γὰρ ἐκεῖνα εὐβλαστώτερα τῶν ἡμέρων ἐστὶ διὰ τὰς αὐτὰς αἰτίας· εἰς πλείω γὰρ καὶ κατὰ μικρὰ μεμερισμένων τῶν ἀρχῶν εὐκίνητα γίνεται τῷ περιέχοντι πρὸς βλάστησιν. ἔτι δὲ καὶ ἡ ξηρότης συμβάλλεται. καὶ γὰρ διὰ τοῦτ' ἐλάττων ἡ ὑγρότης, τὸ δὲ ἔλαττον εὐκίνητοτερον. καλλίων οὖν καὶ ἄθροωτέρα τῶν εἰργασμένων ἡ βλάστησις καὶ ἡ καρπογονία, προτέρα δ' ἐκείνη.

[6] αὐτὸ δὲ τοῦτ' ἂν τις ἀπορήσειε διὰ τί τὰ ἄγρια τῶν ἡμέρων ἰσχυρότερα ὄντα τοὺς καρποὺς οὐ πεπαίνει· κατὰ γὰρ τὰς δυνάμεις ἐχρῆν καὶ τὰς πέψεις εἶναι. μία μὲν δὴ τις αἰτία τὸ πλῆθος τῶν καρπῶν. οὐ γὰρ τοσοῦτον ὑπερίσχουσι τῷ ἰσχύειν ὅσῳ πλείω τοῦ συμμέτρου τὸν καρπὸν ἴσχουσιν· ἂν δὲ πλῆθος πολὺ κἀκείνων οὐκέτι γίνεται πέψις, διὸ καὶ οἱ γεωργοὶ παραιροῦσιν, ὅταν ὧσι πλείω. ἑτέρα δ' ὅτι πυκνότερα καὶ ξηρότερα καὶ εἰς ἑαυτὰ μᾶλλον ἔλκοντα τὸ ὑγρόν, ἡ δὲ τροφή καὶ ἡ πέψις ἐνδόσει τῆς ὑγρότητος ἦν οὐ ῥάδιον ἀντισπωμένην λαμβάνειν.

[7] ἀπλῶς δ' οὐ τὰ ἰσχυρότερα καὶ τροφιμώτερα καθάπερ οὐδ' ἐπὶ τῶν ζώων, ἀλλ' ἑτέρα τις καθ' ἑαυτὴν πρὸς καρπογονίαν ἰσχύς καὶ δύναμις. μανὼν γὰρ καὶ εὐδίοδον καὶ ὑγρὸν εἶναι δεῖ τὸ καρποτοκῆσον, ἡ δὲ πυκνότης ἐναντίον ὥσπερ καὶ ἐπὶ τῶν γυναικῶν καὶ ἐπὶ τῶν ἄλλων ζώων. ὁ καὶ ἡ γεωργία βούλεται ποιεῖν ἀφαιροῦσά τε τὰ περιττὰ καὶ τροφὴν παρέχουσα καὶ εὖειλα καὶ εὖπνοα ποιοῦσα. προφαίνει μὲν οὖν πλείω καρπὸν διὰ τὸ πρότερον εἰρημένον, τοῦτον δὲ οὐκ ἐκπέττει διὰ ταύτας τὰς αἰτίας.

[16.1] Ἡ δὲ πέψις ἐστὶν ἐν τῷ περικαρπίῳ· τοῦτο δὲ δεῖ γίνεσθαι καὶ λαβεῖν χυλὸν ἀρμόττοντα πρὸς τὴν ἡμετέραν φύσιν. ἴσως δὲ αὐτὸ τοῦτο πρότερον εὖ ἔχει διελεῖν ὅτι πέψις ἐστὶν ἡ μὲν οὖν τῶν περικαρπίων, ἡ δ' αὐτῶν τῶν καρπῶν. καὶ ἡ μὲν πρὸς τὰς ἡμετέρας τροφάς, ἡ δὲ πρὸς γέννησιν καὶ διαμονὴν τῶν δένδρων· οἱ γὰρ καρποὶ καὶ τὰ σπέρματα τούτων χάριν. ἐκατέρα δὲ πῶς ἐναντιοῦται πρὸς τὴν ἑτέραν. ἅμα γὰρ τὸ περικάρπιον ὑγρότερον καὶ πλεῖον καὶ ὁ καρπὸς ἐλάττων καὶ ἅμα μείζων οὗτος καὶ τὸ περικάρπιον ἔλαττον καὶ σκληρότερον καὶ δυσχυλότερον.

[2] πρὸς ὃ δὴ καὶ ἡ γεωργία μεμηχάνηται κωλύουσα τὴν τούτων αὔξησιν καὶ τροφήν. ἅπαν γὰρ ὥς εἰπεῖν καὶ ἡμερον ἀγρίου καὶ γεωργομένου ἀγεωργήτου καὶ κάλλιον εἰργασμένον τοῦ χεῖρον μικροπυρηνότερον

ἀνυγραινόμενον τε μᾶλλον καὶ τὴν τροφὴν περισπῶν εἰς τὸ περικάρπιον, ἔτι δὲ τοὺς χυλοὺς ἐκπεπαῖνον εἰς συμμετρίαν τῆς ἡμετέρας χρείας. αἱ μὲν οὖν πέψεις τοσοῦτον διεσπᾶσιν εἴπερ χρὴ καὶ τὴν μὴ εἰωθυῖαν πέσιν λέγειν.

[3] τάχα δ' ἂν τις ἀπορήσειεν ἐκεῖνο καὶ ἀξιώσειεν ὃ τὰ ἰσχυρότερα κατακρατεῖ τοῦτο καὶ τὰ ἀσθενέστερα κατακρατεῖν. τὸ δὲ σπέρμα πάντων ἰσχυρότατον, κοινὸν γὰρ τέλος πάντων τῶν φυτῶν ἐστὶν ἐπεὶπερ ἡ τοῦ ὁμοίου γένεσις τέλος. ἅμα δὲ καὶ ἐν τοῖς ζώοις δοκεῖ τελειουμένης ἐπιγίνεσθαι τῆς φύσεως, ὅταν δὲ ἐλλείπη διὰ τὴν ἡλικίαν ἢ παρακμάσῃ διὰ τὸ γῆρας ἐξαδυνατεῖ τὸ γεννᾶν.

[4] οὐκ ἀλόγως δ' ἂν οὔτε ἀπορήσειεν οὔτε ἀξιώσειεν· ἐν τελειότητι μὲν γάρ τινι τὸ σπερμοφυεῖν καὶ τῶν ζώων ὅσων ἡλικίαν λάβοι τις ἄν. οὐ μὴν γε οὐδὲ τὰ ἰσχυρότατα σπερματικώτατα ἀλλὰ σχεδὸν ἐναντίως ἐκατέρωθεν μεριζομένης τῆς τροφῆς καὶ δυνάμεως· ὃ δὴ καὶ ἐπὶ τῶν φυτῶν συμβαίνει κατὰ λόγον συμβαῖνον. οὕτω δὲ δεῖ τὴν ἀναλογίαν λαμβάνειν ὡς <εἰς> ὁπότερον ἂν τούτων ὁρμήσῃ θάτερον ἐλλιπέστερον ἔσται· διαρκεῖν γὰρ οὐ δύναται πρὸς ἅμφω· τοῦτο γὰρ σχεδὸν ἐν ἅπασιν ὁμολογοῦμενον.

[5] ἐν δὲ τοῖς φυτοῖς τρεῖς τινές εἰσιν οἱ μερισμοί, πρὸς αὐτὸ τὸ δένδρον καὶ τὴν βλάστησιν ὅπερ ἐναντίον τοῖς καρποῖς ἐὰν πλεῖον γένηται τοῦ ξυμμέτρου, διὰ τοῦτο γὰρ ἀκαρπία· καὶ πάλιν ἐν αὐτοῖς καὶ τοῖς περικαρπίοις· ἡ γὰρ εἰς τὸ ἕτερον ὁρμὴ κωλύει τὴν ἐτέραν. ὥσπερ οὖν ἐπ' ἐκείνων οὐκ ἄλογον οὐδ' ἐπὶ τούτων, ἀλλ' ἔχει τὸ ἀνάλογον· τὰ γὰρ ἄγρια καὶ εἰς τὸν καρπὸν καὶ εἰς ἑαυτὰ τὴν ὑγρότητα ἄγοντα παραιρεῖται τῶν περικαρπίων ὥστε μείζω γίνεσθαι τὸν καρπόν.

[6] τάχα δ' οὐδ' ἂν που δόξειεν ὅλως ἄτοπον εἶναι τὸ μᾶλλον ἐφικνεῖσθαι τὰ ἄγρια τῶν σπερμάτων ὥσπερ ἄρρενα ὄντα πυκνότερά τε καὶ ξηρότερα τὴν φύσιν· διαθιγνύουσι γὰρ αἱ κατεργασίαι καὶ αἱ τροφαί· τοῦτο μὲν οὖν ὡς καθ' ὁμοιότητά τινα λεγέσθω πορρωτέρω κείμενον· τῶν δὲ πεπάνσεων εἰς μὲν τὴν γένεσιν αὕτη κυριώτερα, πρὸς δὲ τὴν ἡμετέραν χρείαν ἡ τῶν περικαρπίων. ἐν ποτέρᾳ δὲ δεῖ θέσθαι τὸ τελειότερον ἄλλος λόγος· ἐπεὶ οὕτω γε καὶ ὦν τοῖς φύλλοις μόνον χρώμεθα καὶ ὦν ταῖς ῥίζαις ὥσπερ τῶν λαχάνων αὕτη κυριώτερα πέψις ἔσται. καίτοι γε τούτων τὸ τέλος ἐν τοῖς σπέρμασιν οἷς ἡμεῖς οὐδὲν χρώμεθα πρὸς τὴν τροφήν.

[7] ἔστι δέ τις καὶ οὗτος ὁ λόγος ὡς διὰ τὴν ψυχρότητα τῶν ἀγρίων οὐ δυναμένων πέττειν. τοὺς δὲ πυρῆνας ἐκ τῆς ξυλώδους καὶ περιττωματικῆς γίνεσθαι τροφῆς ὥσπερ τὰ <ὀστᾶ> ἐν τοῖς ζώοις· αὐτὸ μὲν τοῦτ' ἴσως οὐ

κακῶς εἰ ὁ πυρὴν ἐκ τοῦ γεώδους καὶ ξυλώδους, ἀλλὰ τὸ σπέρμα οὐκ ἔθ' ὁμοίως, ἀλλ' ἐκ τῆς καθαρωτάτης περιπτώσεως. πέφυκε δὲ τὰ θερμὰ μάλιστα σπερμοφυεῖν ἢ θερμότερα ἂν εἴη. καίτοι γε τῆς τῶν ἡμέρων θερμότητος ἐκεῖνο φέρεται σημεῖον ἢ τῶν ὁπῶν δύνამις· ὁ μὲν γὰρ τῆς συκῆς τὸ γάλα πῆγνυσιν, ὁ δὲ τοῦ ἐρίνεοῦ οὐ πῆγνυσιν ἢ κακῶς.

[8] πρὸς αὐτὸ δὲ τοῦτο πάλιν ἀντικεῖται τις ἐτέρα καθόλου πίστις ὑπὲρ τῆς θερμότητος, ὅτι τὰ ἄγρια μᾶλλον ἐν τοῖς ψυχροῖς δύνανται διαμένειν καὶ ὅλως δὲ διὰ θερμότητα ἢ ἰσχύς. ἀλλ' ὑπὲρ μὲν τούτων τάχα ἂν ὕστερον εἴη λεκτέον. πλείων γὰρ ὁ λόγος καὶ ἔχων τινὰ ἀπορίαν, ποῖα θερμὰ καὶ ψυχρὰ καὶ ποίοις διοριστέον καὶ προσέτι τὸ ποῖον τὸ αἴτιον εἴτε μόνον εἴτε μεθ' ἐτέρων.

[9] καὶ χυλῶν δὲ ἡ πέψις δόξειεν ἂν ἔχειν διαίρεσιν καὶ ἀπλῶς καὶ πρὸς ἡμᾶς οἷον ὅσα ταῖς δριμύτησι καὶ ὅσα τοῖς φαρμακώδεσι καὶ ὁπώδεσι χυλοῖς, ἃ δὴ καὶ ἐπαινοῦσι καὶ μάλιστα χρῶνται τοῖς τοιούτοις. ταῦτα μὲν οὖν ὥσπερ ιδιότης τις φύσεως πρὸς ἣν δῆλον ὅτι καὶ αἱ τροφαὶ καὶ αἱ κατεργασίαι τείνουσιν ἢ τούναντίον αἱ ἄγρια καθάπερ τῷ σιλφίῳ καὶ τῇ καππάρει καὶ εἴ τι ἄλλο φεύγει τὴν ἐργασίαν, ἢ εἴ τι πάλιν αὐτὸ διώκει τὴν ξηρὰν καὶ ὑγρὰν καὶ χειμερινήν.

[10] αὐτοῦ δὲ τούτου τάχ' ἂν τις πάλιν ἀπορήσειε κοινήν τινα ἀπορίαν καὶ καθόλου πότερα τὴν φύσιν ἐκ τῶν αὐτομάτων μᾶλλον θεωρητέον ἢ ἐκ τῶν κατὰ τὰς ἐργασίας καὶ ἐν ποτέροις τὸ κατὰ φύσιν. σχεδὸν δὲ τούτῳ ταῦτό, μᾶλλον δὲ μέρος τούτου [καὶ] πότερον ἐκ τῶν ἀγρίων ἢ ἐκ τῶν ἡμέρων. ἡ μὲν γὰρ φύσις ἐν αὐτῇ τὰς ἀρχὰς ἔχει καὶ λέγομεν τὸ «μὲν» κατὰ φύσιν, τὸ ἐκ τῶν αὐτομάτων τοιοῦτον, τὸ δ' ἐξωθεν ἄλλως τε καὶ «τὸ» κατὰ τέχνην· ἀφ' ἐτέρας γὰρ ἀρχῆς.

[11] οὐδ' ἐν τοῖς ζώοις ὅσα πλάττεται ἢ καταναγκάζεται πρὸς μικρότητα καὶ μέγεθος καὶ τιν' ἄλλον τύπον τῆς μορφῆς οὐ θετέα ταῦτα κατὰ φύσιν. ἢ δ' αἰεὶ πρὸς τὸ βέλτιστον ὁρμᾷ καὶ τοῦθ' ὥσπερ ὁμολογοῦμένον ἐστίν, ταῦτη δὲ καὶ τὰ τῆς θεραπείας· ἅμα γὰρ καὶ τελείωσις γίνεται τῆς φύσεως ὅταν ὢν ἐλλιπὴς τυγχάνῃ ταῦτα προσλάβῃ διὰ τέχνης οἷον τροφῆς τε ποιότητα καὶ ἀφθονίαν καὶ τῶν ἐμποδιζόντων καὶ τῶν κωλυνόντων ἀφαίρεσιν· ἃ παρέχουσι δῆλον ὅτι καὶ οἱ οἰκεῖοι τόποι πρὸς ἕκαστον, ἐν οἷς δὴ φαμεν δεῖν θεωρεῖν τὰς φύσεις αὐτῶν.

[12] ἀλλ' ἐκεῖνοι μὲν ἀπὸ τῶν ἐξωθεν μόνον παρέχουσιν οἷον ἀέρος καὶ πνεύματος καὶ ἐδάφους καὶ τροφῆς, ἡ δὲ γεωργία καὶ ἐν αὐτοῖς μετακινεῖ καὶ

μετατίθῃσιν· ὥστ' εἴπερ καὶ ἐκεῖνά γε προσαπαιτεῖ πρὸς τὸ βέλτιον καὶ ταῦτα προσδέχοιτ' ἂν ὡς ἂν οἰκεῖα· προσαπαιτεῖν δ' αὐτὴν καὶ ζητεῖν εὐλογον ἄλλως τε καὶ ἐκ τούτων ἡρητημένην καὶ ἐν τούτοις ἔχουσαν τὰς ἀρχάς· ἐπεὶ κάκεῖνο τοῖς αὐτομάτοις ἄτοπον συμβαίνει καὶ ὥσπερ παρὰ φύσιν τὸ ἐκ τῶν σπερμάτων χεῖρω γίνεσθαι. καὶ ὅλως μὲν ἐξίστασθαι τοῦ γένους· οὐδὲ γὰρ δὴ τοῦτο κατὰ φύσιν, ἀλλ' αἰετὸ ὁμοιον ἀπογεννᾶν.

[13] αἱ μὲν οὖν ἀπορίαι σχεδὸν αὗται τε καὶ τοιαῦται, φαίνεται δὲ καὶ ἐκ τῶν προτέρων εἶναι δῆλον ὅτι διαιρετέον τὰς φύσεις ὥσπερ καὶ τὰς πέψεις λέγομεν. τοῖς μὲν γὰρ ἢ αὐτόματος ἢ οἰκειότερα, τοῖς δὲ ἢ τῆς θεραπείας καὶ γεωργίας, ἔνια δ' ἀμφοτέρως. ἐξ ὧν καὶ διαιρετέον ὥσπερ καὶ ἡ φύσις διήρηται ἡμέροις καὶ ἀγρίοις ὁμοίως ἔν τε ζώοις καὶ φυτοῖς. ἑκατέροις γὰρ ἔστι πολλὰ φυσικὰ καὶ οἰκεῖα καὶ πρὸς σωτηρίαν καὶ πρὸς διαμονὴν καὶ πρὸς αὐξήσιν καὶ βλάστησιν καὶ πρὸς τὴν τῶν καρπῶν γέννησιν. ἴσως δὲ καὶ ἐν αὐτοῖς τοῖς καρπίμοις πάλιν ἂν τις διέλοι τὰ μὲν εἰς τὸ αὐτόματον ἀφιεῖς, τὰ δὲ εἰς ἐπιμέλειαν καὶ κατεργασίαν μόνον. ἀλλὰ γὰρ τούτων μὲν ἐνταῦθ' ὁ διορισμός.

[17.1] Περὶ δὲ τῆς πέψεως ὅθεν ὁ λόγος ἐξέβη πάλιν τὰ ἐπίλοιπα λεκτέον. ὥς γὰρ ἐπὶ τὸ πᾶν ὧν μὲν ὁ καρπὸς ὑγρὸς καὶ γυμνὸς ἢ λεπτὸν ἔχων περὶ αὐτὸν κέλυφος ταῦτα μὲν πρωΐκαρπα καθάπερ ἄμπελος καὶ συκὴ, μάλιστα δὲ συκάμινος· αὕτη γὰρ γυμνὸν ἔχει τὸν καρπὸν ὥσθ' ὅσον ἂν ὁ ἥλιος ἐπέλθῃ ταχὺ προηλλοίωσεν, βραχείας δεόμενον θερμότητος· ἅμα δὲ καὶ ἐν αὐτῷ συνεργάζεται δύναμις ἰσχυρὰ καὶ ἀθρόως ἐπιούσα καθάπερ καὶ πρὸς τὴν βλάστησιν.

[2] ἡ γὰρ ὀψιότης ἐποίησεν ἀθροισμὸν, ὅθεν αἱ τε βλαστήσεις ἀθρόοι καὶ μετὰ φορᾶς γίνονται νεανικῆς ὥστε καὶ ψόφον ποιεῖν καθάπερ τινές φασι καὶ αἱ πέψεις ταχεῖαι· παρόμοιον γὰρ τὸ συμβαῖνον ὥσπερ καὶ τοῖς σίτοις ὑπὸ τῶν χειμῶνων κατεχομένοις· ἀνεθέντες γὰρ οὕτω ταχείας ποιοῦνται τὰς αὐξήσεις ὥστε μὴ πολὺ καθυστερεῖν ἢ μὴ κατὰ λόγον τοῖς εὐδιεινοῖς.

[3] ἡ μὲν οὖν τῆς συκάμινου διὰ τοῦτο πρώτος. ὥς δὲ Μενέστωρ φησίν, ἡ μὲν βλάστησις αὐτῆς ὀψία διὰ τὴν ψυχρότητα τοῦ τόπου, ἡ δὲ πέψις ταχεῖα διὰ τὴν ἀσθένειαν. οἱ δὲ τῆς ἀμπέλου καὶ τῆς συκῆς ὀψιαίτεροι, ὅτι καὶ τὰ κελύφη περίκειται καὶ ὑγρότης πλείων καὶ παχύτερα. καὶ τὸ μὲν σῦκον μεῖζον τῷ ὄγκῳ καὶ ἀθροωτέρα πως ἢ πέψις αὐτῶν, οἱ δὲ βότρυες καὶ τῷ πλήθει πλείους ὥς πρὸς τὴν δύναμιν καὶ ἐν τούτοις ἀθρόος ὁ καρπὸς καὶ οὐ διειλημμένος, ἔτι δὲ ὑπόσκιος καὶ οὐχ ὁμοίως ὑπαίθριος καὶ ἡ ὑγρότης πολλή,

φύσει γὰρ τὸ δένδρον φύλυδρόν ἐστιν. ἔτι δὲ καὶ ταύτῃ συμβαίνει τὸ μὴ ἄθρόον ἀλλὰ κατὰ μέρος πέττειν, διὸ καὶ πολὺν διαμένει χρόνον καὶ ἐπὶ πλεῖον δὴ τούτοις ἢ ὑγρότης λεπτὴ καὶ ὑδατώδης. ἅπαντα γὰρ τὰ γλυκέα βραχυτέρας ποιεῖ τὰς πεπάνσεις· ἐὰν δὲ δὴ τις καὶ πρὸς τὰς ἡμετέρας χρεῖας ποιῇ τὰς ἀφαιρέσεις ἔτι μᾶλλον.

[4] αὐτῶν μὲν οὖν τούτων σχεδὸν ἐν τούτοις αἱ αἰτίαι τοῦ πρότερον καὶ ὕστερον. οὐ μὴν καθ' ὅλων τῶν δένδρων ἐστὶ τὸ πρῶτον. πολλὰ γὰρ διαφοραὶ καὶ ἀμπέλων καὶ συκῶν ὥστ' ἐνίων πόρρω πάνυ πεπαίνεσθαι, διόπερ ἴσως τὰς καθ' ὅλου λεκτέον αἰτίας. πρωΐκαρπα μὲν ὅσα μῆτε κάθυγρα μῆτε ψυχρὰ τοῖς ὁποῖς, ἔτι δὲ γυμνὰ ἢ λεπτοῖς ὑμέσι περιεχόμενα καὶ τὴν πέψιν ἔχοντα τῶν χυλῶν ὑδαρῇ καὶ μὴ παχεῖαν.

[5] ὀψίκαρπα δὲ τὰ ἐναντία τούτων ὅσα κάθυγρα καὶ ψυχρὰ καὶ τοῖς καρποῖς ἢ τοῖς περικαρπίοις ξυλώδη καὶ σκληρὰ καὶ ὧν αἱ περιοχαὶ τοιαῦται καὶ ἅμα πλείους, ἔτι δὲ ὧν οἱ χυλοὶ καὶ πρὸς τὰς πέψεις λιπαροὶ ἢ ἄλλην τινὰ ἔχοντες παραπλησίαν δύναμιν. [ἐὰν ξηροὶ τε καὶ ὀλίγην ἔχοντες ἅμα καὶ τοιαύτην ὑγρότητα πρὸς τὴν πέψιν.] ἅπαντα γὰρ ταῦτα κωλυτικὰ τῶν πέψεων.

[6] ἐκ δὲ τῶν καθ' ἕκαστα θεωροῦσι σύμφωνος ὁ λόγος τῶν γινομένων. τῶν γὰρ ἀειφύλλων ἅπανθ' ὥς εἰπεῖν ὀψίκαρπα. ξυλώδεις δὲ οἱ καρποὶ καὶ τὰ περικάρπια καθάπερ πεύκης, πίτυος, κυπαρίττου, τῶν δ' αὖ ξηροὶ ἢ λιπαροὶ ἢ γλισχρότητά τινα ἔχοντες, ὥσπερ ὁ τῆς κέδρου καὶ τῆς ἰξίας, διὸ καὶ οὐκ ὄντες μεγάλοι δυσκατέργαστοι τῷ εἶναι τοιοῦτοι, καὶ ἅμα διὰ τὴν πυκνότητα μικρὰ καὶ ἢ ἐπιρροὴ καὶ ἢ ἐπίσπασις ὅλη.

[7] τῶν δὲ μὴ ἀειφύλλων ὅσα κάθυγρά τε καὶ ψυχρὰ καὶ ὅσα γεώδη· καὶ γὰρ ἡ ψυχρότης καὶ τὸ πλῆθος δυσέργαστον καὶ τὸ γεῶδες καὶ ἡ ξηρότης ὥσπερ τῶν ἀχράδων καὶ τῶν βαλάνων, ὅσα δὲ κέκρται πρὸς τούτοις καὶ ἐν θερμασίᾳ τυγχάνει καὶ μανὰ ταῦτα καὶ πρωΐβλαστῇ καὶ πρωΐκαρπα συμμετρίαν ἔχοντα τῆς μίξεως καὶ ἐν αὐτοῖς καὶ πρὸς τὸ περιέχον.

[8] χρὴ δὲ λαμβάνειν ἕκαστα ὥσπερ τῶν εἰρημένων ἐὰν μὴ τις ἢ κώλυσις. οὐδὲ γὰρ ἐν τούτων κύριον ἐπενεγκεῖν οὔτε πρωΐκαρπίαν οὔτε ὀψικαρπίαν οὐδέ γε πλείω <ἢ> πάντα, ἐὰν ἕτερ' ἅττα ἐναντιώτατα. λέγω δ' οἷον ἔνια γυμνόκαρπα μὲν, ὅψια δέ, καθάπερ μῖλαξ καὶ ἄλλ' ἅττα βοτρυώδη. τὰ δὲ πρὸς τῷ ὀψίῳ καὶ κατὰ μέρος πεπαίνεται καθάπερ ὁ βάτος. τούτων γὰρ τὰ μὲν, ὅτι ψυχρὰ τῇ φύσει, ὀψίκαρπα καὶ ὀψιβλαστῇ, ὅσα δὲ γυμνὰ καὶ ἀκέλυφα, οὐχ ἱκανὰ περιλαμβανόμενα τῇ ὥρᾳ· τὰ δέ, ὅτι ξηρὰ τῇ φύσει· πᾶν δὲ τὸ ξηρὸν ἰκμάδος δεῖται καὶ πρὸς τροφήν καὶ πρὸς πέψιν·

[9] ὥς δὲ ὁ βλαστὸς ἀμφοτέρων μετέχει τῶν ὥρων ἐπὶ πολλὸν χρόνον παρεκτείνων· ἀλλ' ὥστε τύπῳ εἰπεῖν ταύτας ὑποληπτέον εἶναι τὰς αἰτίας. ἐπεὶ καθ' ἡλικίαν ὀψικαρπότερα καὶ μὴ κατὰ τὰς ἐνιαυσίους ὥρας οἷον τὰ νέα τῶν φυτῶν διὰ πληθὸς ὑγρότητος καὶ τὸ ὅλον τροφῆς ὀψίκαρπα. τὰ δ' αὖ πάλιν ὡς ὀψίφορα πόρρω τῆς ἡλικίας ὄντα καθάπερ τὸ ἐν Αἰγύπτῳ λεγόμενον δένδρον ὃ ἑκατοστῷ ἔτει μυθολογοῦσι φέρειν καρπὸν. ἢ δ' αὖ συκάμινος οὐδὲ πέττειν δύναται δι' εὐτροφίαν καὶ πληθὸς ὑγρότητος μὴ ἐπικνισθέντων καὶ ἐπαλειφθέντων ἐλαίῳ τῶν καρπῶν. οὐ μόνον δὲ τὸ πληθὸς ὀψικαρπεῖν ποιεῖ τῆς τροφῆς, ἀλλὰ καὶ ἀκαρπεῖν ἔνια, καθάπερ ἐπὶ τε τῶν ἀμπέλων εἴρηται καὶ ἐπὶ τῶν ἀμυγδαλῶν καὶ ὅλως τῶν διατιτραινομένων καὶ τοῖς παττάλοις κολαζομένων.

[10] ἅπαντα γὰρ ὅταν τοῦτο πάθῃσι, τῆς ὑγρότητος ἀπελαθείσης, τὰ μὲν ἐξ ἀκάρπων κάρπιμα, τὰ δὲ καλλικαρπότερα καὶ ἐγχυλότερα γίνεται. τῆς δὲ ἀμυγδαλῆς ἐάν τις ἐγκόψας τὸν πάτταλον ἀποκαθάρῃ τὴν ἐπιρροὴν τῆς ὑγρότητος ἐπὶ ἔτη δύο ἢ τρία καὶ γλυκεῖαν ἐκ πικρᾶς γίνεσθαί φασιν. δοκεῖ δὲ καὶ ἡ συκὴ ῥιζοτομηθεῖσα καὶ κατασχασθεῖσα εὐφορὸς τε ἐξ ἀφόρου γίνεσθαι καὶ πολυκαρπεῖν μᾶλλον. σχεδὸν δὲ καὶ <τὸ> περὶ τὰς ἀμπέλους τὰς τραγώσας ὁμοίον ἐστίν. καὶ γὰρ τούτων ἀφελεῖν δεῖ καὶ ἀντισπάσαι τὴν εἰς τὴν βλάστησιν ὁρμὴν ὅπως καρποτοκῶσιν.

[18.1] Ἐν τῷ αὐτῷ δὲ πως γένει τῆς αἰτίας ἐστὶ καὶ τὸ μὴ τὴν ἀρίστην καὶ πίειραν καὶ βαθύγειον ἀρίστην εἶναι τοῖς δένδροις ἀλλὰ τὴν δευτέραν, τῷ δὲ σίτῳ ἐκείνην. ἐν μὲν γὰρ τῇ <ἀρίστη> κατὰ βάθους ἰούσης τῆς ῥίζης καὶ τῆς χώρας εὐτραφοῦς πλείω τῆς συμμέτρου τροφὴν ἐπισπῶνται, ἐν δὲ τῇ λεπτογείῳ καὶ μὴ βαθείᾳ τὰς ῥίζας ἀναγκαῖον ἐπιπολαιότερας εἶναι καὶ τὴν τροφὴν ἐλάττω καὶ σύμμετρον· ἐπεὶ καὶ ἐν ταῖς ψαφαραῖς καὶ ταῖς πετρώδεσι δύνανται λαμβάνειν ἱκανὴν καθιέντα καὶ βιαζόμενα ταῖς ῥίζαις, ἔτι δὲ καὶ καταψύχειν τὰς ῥίζας ἢ γε πετρώδης δοκεῖ μᾶλλον ὅπερ ἐπιζητεῖ τὰ δένδρα.

[2] ὁ δὲ σῖτος ἐν μὲν ταῖς ἀγαθαῖς συλλαμβάνει μὲν πλείω διὰ τὸ μὴ κατὰ βάθους εἶναι τὰς ῥίζας· ἐν δὲ ταῖς μοχθηραῖς καὶ καταξηραίνεται διὰ τὸ μὴ ἔχειν πολλὰς· καταψύξεως δὲ δεῖται διὰ τὸ μὴ κατὰ βάθους εἶναι. ὅταν δὲ ἐπομβρίαί γένωνται, οὐ πολὺς ὁ διασφζόμενος <καὶ> χεῖρων ἐστίν. ἐπεὶ καὶ οἱ τῶν δένδρων καρποὶ διὰ τὸ κρατεῖσθαι τῷ πλήθει τῆς τροφῆς ἐξίστανται τῶν γενῶν ὥσπερ ἐλέχθη πρότερον.

[3] ἄτοπον δ' ἂν δόξειεν τὸ τῶν ὁμογενῶν ἔνια τὰ μὲν εἶναι πρῶϊα, τὰ δὲ ὄψια καθάπερ συκαὶ τέ τινες καὶ ἄμπελοι καὶ μηλέαι καὶ ἄπιοι καὶ τᾶλλα· τῶν

γὰρ ζῶων οὐδὲν τοιοῦτον πλὴν κυνός, ἀλλὰ παρισόχρονα κατὰ τὰς κηήσεις καὶ τὰς ἐκτροφάς, ἀλλὰ μόνον παραλάττει ταῖς ὥραις κατὰ τοὺς τόπους καὶ μάλιστα γε ξυνανθρωπευόμενα. τάχα μὲν οὖν καὶ αἱ βλαστήσεις ἐνίων ὕστεραι καὶ παραδιδόασιν τὸ ἀνάλογον. οὐ μὴν ἀλλ' ἐφ' ὧν τοῦτο μὲν ἐστὶν ἔοικεν ὥσπερ ἐν ὁμωνυμία γίνεσθαι τὸ ἀπόρημα.

[4] ἔστι γὰρ εὐθὺ τῇ φύσει καὶ τοῖς ζώοις καὶ τοῖς φυτοῖς ὥσπερ τὰ ἡμεῖρα καὶ τὰ ἄγρια καὶ τὰ πολὺκαρπα, τὰ δ' ὀλιγόκαρπα, τὰ δ' ὅλως ἄκαρπα. τὸ γὰρ τῶν ἐρνεῶν ἕτερον γένος οὐ δυνάμενον πέττειν οὐδὲ διῖκνεῖσθαι πρὸς τὴν τελείωσιν. ἕτερον δὲ καὶ τὸ τῶν ἀμπέλων τῶν μαινομένων καλουμένων, αἱ οὐ μόνον βλαστάνουσιν, ἀλλὰ καὶ πέττουσι καὶ ἀνθοῦσι καὶ βοτρυνοῦνται καὶ οὐ δύνανται τελειοῦν. ὡσαύτως δὲ καὶ τῶν ῥοῶν καὶ εἴ τι ἄλλο μέχρι τοῦ ἀνθους ἀφικνεῖται μόνον. ἐν γὰρ τῇ ἰδίᾳ φύσει τὰς διαφορὰς ἕκαστα τούτων ἔχοντα δικαίως ἕτερ' ἂν λέγοιντο κατὰ τὸ εἶδος.

[5] ὅσα δὲ δύνανται βλαστάνειν καὶ ἀνθεῖν καὶ πεπαίνειν κατ' ἄλλα καὶ ἄλλα μέρη καθάπερ ἡ μηδικὴ μηλέα ταῦτα μεῖζω τινὰ ἔχει καὶ ἰδιωτέραν δύναμιν ἐν ἑαυτοῖς εἴπερ ἀεὶ διὰ τέλους τοῦτο δρᾷ· παρόμοιον γὰρ τὸ συμβαῖνον ὥσπερ ἐν τῷ ἀέρι πρότερον ἐλέχθη τῷ μαλακῷ καὶ εὐκράτῳ καθ' ὃν ἡ καρποφορία καὶ ἡ βλάστησις· πλὴν ἐκείνων μὲν ὁ ἀῆρ αἴτιος διὸ καὶ πᾶσι κοινόν, ἐνταῦθα δὲ ἡ τοῦ δένδρου φύσις καὶ δύναμις εὐκρατος οὔσα πρὸς ἀπάσας τὰς ὥρας.

[19.1] Ἐπεὶ δ' ἕτερον τὸ περικάρπιον, τοῦτο γὰρ πρὸς τὴν χρῆσιν ἡμῶν, ἀνάγκη μὲν τούτων ὅρον τινὰ καὶ [τὸν] χρόνον εἶναι, τὸν δὲ ὑπερβάλλοντα λυμαίνεσθαι χειμῶνων τε καὶ ὑδάτων καταλαμβανόντων· τῶν δὲ καρπῶν μὴ εἶναι· συγκαταρρέουσι γὰρ τούτοις προεκπηδῶσιν ὥσπερ οἱ τῆς πιττώδους πεύκης καὶ ὅλως τῶν κωνοφόρων· προσηρημένων γὰρ ἔτι τῶν κώνων ἐκπηδᾷ τὰ κάρυα καὶ καταλείπονται κενοί. ταῦτο δὲ συμβαίνει τοῦτο καὶ ἐπὶ τῶν κυπαρίττων, ἀλλ' ἐνθα μὲν τὸ σπέρμα καρυῶδες, ἐνθα δὲ ὑμενῶδες καὶ ἀμενηνόν.

[2] ὅσα μὲν οὖν ξυλῶδεσιν ἢ δερματικοῖς τισὶ περιέχεται καθάπερ τὰ τε κάρυα καὶ βάλανοι ταῦτα περιστεγόμενα διατηρεῖται πρὸς τὴν τῆς βλαστήσεως ὥραν. ὧν δὲ σαρκώδη τὰ περικάρπια ταῦτα δὴ σηπομένων καὶ περιρρεόντων αὐτὰ καθ' αὐτὰ σφύζεται, τὰ μὲν ὄντα ξυλῶδη καθάπερ τὸ γίγαρτον καὶ ὁ τοῦ φοίνικος καὶ ὁ τῆς ἐλάας πυρήν, τὰ δὲ ἐν ὑμέσι καὶ χιτῶσι περιεχόμενα πλείοσι, τὰ δὲ καὶ ἀλλήλοις πῶς συνημμένα καὶ κοινὴν περιοχὴν ἔχοντα καθάπερ καὶ τὰ τῶν ἀπίων καὶ μήλων· ἅπαντα γὰρ ταῦθ' ὡς εἰπεῖν ἐν

μεῖζοσι περικαρπίοις ἵνα πλείω διαμένη χρόνον. τῶν μὲν οὖν καρπῶν αὕτη φυλακὴ καὶ σωτηρία πρὸς τὴν γένεσιν.

[3] ἡ δὲ τῶν περικαρπίων παραμονὴ ὅρον τινὰ ἔχει καθάπερ ἐλέχθη πρὸς τὴν χρεῖαν. ἐπεὶ καὶ οἱ χυλοὶ χρονιζόμενοι καὶ ἀνυγραινόμενοι χεῖρους γίνονται, τῶν δὲ οὐδὲ πλείους [οὐδὲ] ἀπὸ τινος ὥρας ὥσπερ οὐδὲ τῶν ἐλαῶν ἀπ' ἀρκτούρου· μέχρι τούτου γὰρ τὸ ἔλαιον ἐγγίνεσθαι δοκεῖ, ἀπὸ δὲ τούτου τῆς σαρκὸς ἡ αὐξησις, καὶ ἐάν γε δὴ πλείω ποιῇ ὕδατα καὶ χεῖρον γίνεσθαι τὸ ἔλαιον ἀμόργην λαμβάνον πλείω, πολλάκις δὲ καὶ σηπομένου τοῦ καρποῦ.

[4] περιμένουσι δὲ «τὴν» πέπανσιν καὶ οὐκ εὐθὺς ἀφαιροῦσιν ὅτι καὶ ἡ κατεργασία καὶ ἡ ἀφαίρεσις χαλεπωτέρα καὶ ἐτι τὰ δένδρα λυμαίνοιτ' ἂν ῥαβδιζόμενα. φαίνεται δ' οὖν εἴπερ τοῦτ' ἀληθές ἡ τοῦ θερμοῦ φύσις δημιουργεῖν τὸ ἔλαιον καὶ τὴν λιπαρότητα τοῦ χυλοῦ συμμετρίαν ἔχουσα πρὸς τὸ ὑποκείμενον. ἡ δὲ πλείων ὥσπερ ἀλλοτρία καὶ ἐπίθετος πρὸς περιττώματος χώραν οἷον ἀντισπῶσα μᾶλλον εἰς τὴν σάρκα τὴν τοῦ χυλοῦ δύναμιν.

[5] ὁ καὶ τοῦ θερούς καὶ τοῦ χειμῶνος συμβαίνει γινομένων ὑδάτων ἐκ Διὸς καὶ βρεχομένων τοῖς ναματιαίοις ἐν ὀρμῇ τῆς αὐξήσεως οὔσης. ἐκσαρκοῦνται γὰρ καὶ ἀπολλύασι τὸ ἔλαιον διὰ τὴν πολυτροφίαν ἂν μὴ μετὰ ταῦτα αἰθρίαί γινόμεναι καταξηράνωσιν, οὕτως δὲ σφύζεται καὶ πληθύνει μᾶλλον. ὅπερ ἤδη καὶ πρότερον πολλάκις γέγονεν, καὶ τὸ τελευταῖον ἤδη ἐπ' ἄρχοντος Νικοδώρου, διὸ καὶ ἡ ρύσις ἐγένετο καλλίων, ἐκ γὰρ τῶν ἡμίσεων ἡ αὐτή. τὰς μὲν πέψεις ὅτι πρὸς τὴν χρεῖαν τὴν ἡμετέραν εὐρίσκομεν ἐκ τούτων καὶ ἐκ τῶν πρότερον δηλὸν ἐν οἷς ὑπὲρ τῶν ἀγρίων εἶπομεν.

[20.1] Φέρει δὲ τοὺς καρποὺς τὰ μὲν ἐκ τῶν ἔνων τὰ δὲ ἐκ τῶν νέων βλαστῶν διεστῶτα ταῖς φύσεσιν εὐθὺς κατὰ τὰς κράσεις. ὅσα μὲν ξηρὰ καὶ πυκνὰ καὶ ξυλώδη ταῦτα μὲν ἐκ τῶν ἔνων, ἅτε μικρᾶς καὶ βραχείας οὔσης τῆς ἐπιρροῆς· ἅμα δὲ καὶ ὁ βλαστὸς ἀσθενὴς ὥστε μήτε μετενεγκεῖν δύνασθαι μήτε κατασχεῖν ὥσπερ ὁ τῆς ἐλάας. ὅσα δὲ ὑγρὰ καὶ μανὰ καὶ τὸ ὅλον εὐτραφῆ, ταῦτα ἐκ τῶν νέων· ἀθρόα γὰρ ἡ ὀρμὴ καὶ πολλή, διὸ ἄμφω δύναται ποιεῖν ἅμα τὸν τε βλαστὸν καὶ τὸν καρπὸν. οὐ μὴν ἀλλὰ καὶ «τὰ» ἐκ τῶν ἔνων φέροντ' ἀποβλάστημά τι ποιεῖται μικρὸν καὶ οὐκ εὐθὺς ἐκ τοῦ ξυλώδους ὁ καρπός· οὐδὲ γὰρ οὐδὲ πέφυκεν ἂν μή τι παράλογον.

[2] ἰδιωτάτη δὲ καὶ πρὸς τὰ ἄλλα καὶ πρὸς αὐτὰ τὰ ξυλώδη τῶν καρπῶν ἡ γένεσις τοῦ φοίνικος, οὐ τῷ φέρειν ἀπὸ τινων ἔνων ἢ νέων, ἀλλὰ τῷ κυούμενον πρότερον ὥσπερ τὰ σταχυηρὰ τῶν σπερμάτων ἐκφαίνειν. ἐκ γὰρ

τῶν ὁμογενῶν, ἃ καλοῦσιν τινες πλοῖα, περιρρηγνυμένων ἐκφαίνεται καθάπερ στάχυς ἢ ράβδος ἔχουσα πρὸς ἑαυτῇ τὸν καρπὸν. αἰτιάσαιο δ' ἂν τις τὴν ξηρότητα τοῦ δένδρου καὶ τὴν ὅλην μορφήν· ἐπεὶ γὰρ φυλακῆς οἱ καρποὶ δέονται καὶ ἔξω συνιστάμενοι καὶ ἐξ αὐτῶν προφαινόμενοι τοῖς μὲν ἄλλοις τὰ φύλλα ταῦτα ποιεῖ καθάπερ εἴρηται· τούτου δὲ ἐπειτέρ οὐ παρὰ τὸ φύλλον ὁ καρπὸς ἀναγκαῖον ἐν αὐτῷ πως τὴν σύστασιν γενέσθαι ὅπως ἰσχύων ἤδη καὶ μεμορφομένος ἀποδοθῇ τῷ ἁέρι. διόπερ ἐν τῷ συγγενεῖ καὶ οἰκείῳ τὴν κύσιν ἐξέτεκεν. ἴσως δὲ εἴπερ ὅμοιον τὸ σταχυοβολεῖν τοῦτο καὶ πλείονων ἐστὶ καὶ τὴν αἰτίαν κοινήν τινα λεκτέον· ἀλλ' εἰ ἄρα μόνον τῶν δένδρων τῷ φοίνικι τοῦτο συμβαίνει· τὸ γὰρ ἴδιον ἐν τοῖς ὁμογενέσι θαυμάζεται· περὶ μὲν οὖν τούτου σκεπτέον.

[3] παρενιαυτοφόρα δὲ καὶ οὐκ ἐπετειοφόρα τῶν δένδρων ὡς τύπῳ λαβεῖν τὰ ξηρὰ καὶ ξυλώδη καὶ ὅσα μὴ ἐκ τῶν νέων ἀλλ' ἐκ τῶν ἔνων φέρει τοὺς καρπούς. οἷον γὰρ προσυλλέξαι δεῖ καὶ προγεννησαι τὸ γεννῶν· οὐ δύναται δ' ἅμα ταῦτα διὰ τὴν πρότερον λεχθεῖσαν αἰτίαν, ὥσπερ τὰ εὐχyla καὶ εὐτροφα· μάλιστα δ' ἐπιδήλως ἢ ἐλάα τοιοῦτο καὶ γὰρ ἀσθενέστατον καὶ ἐπικηρότατον καὶ ἅμα ραβδιζομένη πονεῖ καὶ κατακοπτομένη τὰς θαλείας· ἐπεὶ ὅσοι γε μὴ οὕτω συλλέγουσιν, ἀλλὰ αὐτομάτως αἰετὴν ἀπορρέουσιν καὶ ἀποσεύοντες ἐπετειοφορεῖν φασὶ μάλλον.

[4] μέγα δὲ καὶ αἱ χῶραι διαφέρουσιν. ἐν γοῦν τῇ Ὀλυνθίᾳ φασὶν ὡς αἰετὶ καρποφορεῖ, παραλλαγὴν δὲ ποιοῦνται κατὰ τριετίαν. ὅσα δὲ ἰσχυρότερα τῶν ἐκ τῶν ἔνων φερόντων οἷας ἂν ὁ θεὸς ἄγῃ τὰς ὥρας οὕτως καὶ τὰ τῶν καρπῶν ἀποδιδόασιν, ὥσπερ καὶ τὰ ἐκ τῶν νέων καρποφοροῦντα. καὶ γὰρ ταῦτα ξυνακολουθεῖ ταῖς ὥραις καὶ τῇ κράσει τοῦ ἀέρος.

[5] συμβαίνει δέ, ὅταν μὲν εὐβλαστῶσιν ἄγαν, ἀκαρπεῖν μάλλον, ὅταν δ' εὐκαρπῶσιν, ἀβλαστεῖν ὡς οὐ δυναμένης εἰς ἄμφω διήκειν τῆς φύσεως, ἀλλὰ καὶ καταναλισκούσης θάτερον πρὸς θάτερον. ἴδιον δὲ τὸ ἐπὶ τῆς συκῆς καὶ τῶν λευκῶν ἀμπέλων συμβαῖνον ὥς τινὲς φασιν· ταῦτα γὰρ ὅταν εὐβλαστῶσι τότε μάλιστα εὐκαρπεῖ, εἰ δὲ τοῦτό ἐστι καὶ τὸ πρότερον εἰρημένον ἀληθές. ἢ γὰρ εὐβλάστεια ἀφαιρεῖται τοὺς καρπούς· γίνεται δὲ τοῦτο μάλιστα χῶρας ἀρετῇ καὶ ἰσχύϊ τῶν δένδρων· ἐν γῇ μὲν γὰρ ἀφθόνῳ τάδε ἐλκῦσαι δεινὰ διὰ τὴν ἰσχύν, ὥσπερ ἡ ἀμυγδαλὴ καὶ ἡ ρόα.

[6] δῆλον δὲ ὡς ὅσα τὴν φύσιν ἀσθενῇ ταῦθ' ἥκιστα ὑπερβλαστάνει, ἀλλὰ σύμμετρος αὐτῶν ἢ εὐβλαστία γίνεται πρὸς τὴν καρπογονίαν· δεῖ γὰρ μήθ' ὑπερβλαστὲς μήτε κακοβλαστὲς εἶναι τὸ καρποτοκῆσον. ἢ δὲ συκὴ καὶ ἡ

ἄμπελος ἢ τοιαύτη μάλιστα λαμβάνει τὸ ζύμμετρον διὰ τὴν ἀσθένειαν. δεῖ δὲ ἴσως καὶ χώραν εἶναι μὴ ἀγαθὴν, ἵνα μὴδ' ἐκ ταύτης ἢ ὑπερβολή, διόπερ εἰς τὰς νήσους τὰ τοιαῦτα μᾶλλον ζυμβαίνει. κοινὸς δ' ὁ λόγος περὶ πάντων τῶν ἀσθενῶν. τούτου μὲν οὖν ἐντεῦθεν τὸ αἷτιον ὑπολητέον.

[21.1] Ἐν ἅπασι δὲ τοῖς καρποῖς τὸ περικάρπιον πρότερον μᾶλλον ἢ αὐτός γε ὁ καρπὸς καὶ τὸ σπέρμα γίνεται· τοῦτο δ' οὐ μόνον ὅτι ξυλώδη καὶ πυρηνώδη γίνεται τὰ πολλὰ τῶν σπερμάτων, τὰ δὲ τοιαῦτα συνίσταται βραδύτερον, ἀλλὰ καὶ ὅτι τέλος ὥσπερ ἐλέχθη τὸ σπέρμα, δεῖ δὲ τὸ ἔνεκα ἄλλου πρότερον ἢ ἐκεῖνό γε εἶναι· ἐν προϋπάρχοντι γὰρ ἢ τῶν τοιούτων γένεσις. διὸ οὐχ ἅπαντα ἐνίων τὰ περικάρπια σπερμοφόρα καθάπερ τῶν βοτρύων αἱ μικραὶ ῥάγες ὡς οὐκέτι δυναμένης τελειῶσαι τῆς φύσεως ταύτας· γλυκεῖαι δ' οὐδὲν ἦττον τῶν μεγάλων.

[2] ἢ καὶ δῆλον ὡς ἄρα ῥᾶον ἐκπέψαι τὸ περικάρπιον· ἔοικε γὰρ ὑπὸ τοῦ ἡλίου καὶ τοῦ ἀέρος καὶ τῆς ὥρας συνένεσθαι τὸ δὲ σπέρμα τῆς φύσεως ιδιώτερον εἶναι. πρὸς ἡμᾶς δὲ τὰ μὲν «ἐν» οὐδενί, τὰ δ' ἐν ἐλάττονι λόγῳ, ἐλάττων γὰρ ἢ χρεῖα, διὸ καὶ τὰ ἀπύρηνα καὶ τὰ μαλακοπύρηνα μάλιστα ζητοῦμεν καὶ ἐφ' ὅσον δυνάμεθα τοῦτο σπεύδομεν ὥσπερ οἱ τοὺς βότρυς τοὺς ἀγιγάρτους ποιοῦντες.

ἢ δὲ φύσις δῆλον ὡς ἀμφοῖν ἀποδιδόναι βούλεται τὸ σύμμετρον.

[3] ὁπότερος δ' ἂν πλεονάζῃ θάτερον ἔλαττον· τοῦτο δὲ τῶν μὲν δι' ὑγρότητα καὶ ἀπλῶς εὐτροφίαν γίνεται· διὸ καὶ τὴν γεωργίαν ἔφαμεν ζυμπονεῖν. τῶν δὲ διὰ ξηρότητα καὶ πυκνότητα καὶ τὸ ὅλον ἀτροφίαν. καὶ πρὸς μὲν τὴν ἐκατέρου τελείωσιν καὶ πέψιν, τάχα δὲ καὶ τῶν φυτῶν γένεσιν ὅλως καὶ πρωῒβλαστίαν ἅπαντα τὰ τοιαῦτα τὴν τε τοῦ ἀέρος καὶ τοῦ ἡλίου δύναμιν αἰτιατέον καὶ τὰς ἰδίας ἐκάστων φύσεις εἴτ' οὖν ὑγρότητι καὶ ξηρότητι «καὶ πυκνότητι» καὶ μανότητι καὶ τοῖς τοιούτοις διαφερούσας εἴτε θερμότητι καὶ ψυχρότητι· καὶ γὰρ ταῦτα τῆς φύσεως.

[4] τούτων δὲ τὰ μὲν ἄλλα σχεδὸν τῇ αἰσθήσει φανερά· τὸ δὲ θερμὸν καὶ ψυχρὸν ἐπεὶπερ οὐκ εἰς αἴσθησιν, ἀλλ' εἰς λόγον ἀνήκει, διαμφισβητεῖται καὶ ἀντιλέγεται καθάπερ τὰ ἄλλα τὰ τῷ λόγῳ κρινόμενα· περὶ ὧν καλῶς ἔχει διωρίσθαι πῶς, ἄλλως τ' ἐπεὶ καὶ πολλὰ πρὸς ταύτας ἀνάγεται τὰς ἀρχάς. ἀνάγκη δὲ ἐκ τῶν συμβεβηκότων ἅπαντα τὰ τοιαῦτα σκοπεῖν· ἐκ τούτων γὰρ κρίνομεν καὶ θεωροῦμεν τὰς δυνάμεις.

[5] μία μὲν οὖν αἰτία λέγεται τῶν θερμῶν καὶ ψυχρῶν ἢ εἰς τὸ κάρπιμον ἀνάγουσα καὶ ἄκαρπον ὡς τῶν μὲν θερμῶν καρπίμων ὄντων, καθάπερ καὶ ἐπὶ

τῶν ζώων τῶν γονίμων καὶ ἀγόνων καὶ τῶν ζωοτόκων καὶ ὠοτόκων. ἑτέρα δ' ἢ κατὰ τὰς χώρας θερμὰς ἢ ψυχράς· τὰ γὰρ ἐναντία ἐν ταῖς ἐναντίαις δύνασθαι διαμένειν, τὰ μὲν θερμὰ ἐν ταῖς ψυχραῖς, τὰ δὲ ψυχρὰ ἐν ταῖς θερμαῖς. οὕτως γὰρ εὐθὺς καὶ τὴν φύσιν γεννᾶν ὥς ὑπὸ μὲν τοῦ ὁμοίου φθειρομένων διὰ τὴν ὑπερβολήν, ὑπὸ δὲ τοῦ ἐναντίου σφωζομένων οἶον εὐκρασίας τινὸς γινομένης. ὥσπερ καὶ Ἐμπεδοκλῆς λέγει περὶ τῶν ζώων· τὰ γὰρ ὑπέρπυρα τὴν φύσιν ἄγειν εἰς τὸ ὑγρόν.

[6] συνηκολούθηκε δὲ ταύτῃ τῇ δόξῃ καὶ Μενέστωρ οὐ μόνον ἐπὶ τῶν ζώων, ἀλλὰ καὶ ἐπὶ τῶν φυτῶν· θερμότερα γὰρ εἶναι φησι τὰ μάλιστα ἔνυγρὰ οἶον σχοῖνον κάλαμον κύπειρον, διὸ καὶ ὑπὸ τῶν χειμῶνων οὐκ ἐκπῆγνυσθαι· καὶ τῶν ἄλλων ὅσα μάλιστα ἐν τοῖς ψυχροῖς δύνασθαι διαμένειν, οἶον ἐλάτην πεύκην κέδρον ἄρκευθον κιττόν. ἐπὶ τούτου γὰρ οὐδὲ τὴν χίονα τῇ θερμότητι ἐπιμένειν· ἔτι δὲ σκολιὸν εἶναι διὰ τὴν ἐντεριώνην θερμὴν οὔσαν καὶ διαστρέφειν.

[7] τρίτην δ' αἰτίαν λέγει τοῦ πρωῒβλαστῆ καὶ πρωῒκαρπα εἶναι· φύσει γὰρ καὶ ὁ ὁπὸς αὐτὸς ὢν θερμὸς καὶ βλαστάνειν πρωῒ ποιεῖ καὶ πέττειν τοὺς καρπούς· σημεῖον δὲ ποιεῖ καὶ τούτου τὸν κιττόν καὶ ἕτερ' ἄττα. τετάρτη δ' ἢ τῶν ἀειφύλλων· διὰ γὰρ θερμότητα καὶ ταῦτα οἶεται διατηρεῖν, τὰ δὲ ἐνδεία τούτου φυλλοβολεῖν. προσεπιλέγει δὲ τοῖς εἰρημένοις καὶ τὰ τοιαῦτα σημειούμενος ὅτι τὰ πυρεῖα ἄριστα καὶ κάλλιστα ἐκπυροῦνται τὰ ἐκ τῶν ἐνύδρων ὥς τὰ μάλιστα τοῦ πυρὸς ὄντα τάχιστα ἐκπυρούμενα. καὶ τὰ μὲν ὑπὲρ τῆς θερμότητος λεγόμενα σχεδὸν ταῦτ' ἐστίν.

[22.1] Ἔχει δ' ἀπορίαν εὐθὺς ἐπὶ τοῦ πρώτου λεχθέντος ὥς οὐκ ἐστὶ τὰ καρπιμώτερα θερμότερα. τὰ γὰρ θήλεα τῶν δένδρων πολὺ καρπιμώτερα μὲν, ἥττον δὲ θερμὰ τῶν ἀρρένων ὅπερ ἐκ τῆς τῶν ζώων ὁμοιότητος ληπτέον καὶ μὴ ὁμωνύμως. ἔτι δὲ οὐδὲ τὰ ζῶα τὰ πολυγονώτερα θερμότερα οὐδὲ ἀνάπαλιν ψυχρότερα τὰ ὀλιγογονώτερα καθάπερ τὰ σαρκοφάγα καὶ λαίμαργα. μόνον γὰρ τῶν θερμῶν δοκεῖ κύων καὶ ὕς πολυτοκεῖν. αὐτῶν δὲ τῶν ὁμογενῶν τὰ ὁμοειδέστερα πολυγονώτερα, καθάπερ ἐπὶ τῶν ὀρνίθων. ἢ γὰρ θερμότης ἐξαύξειν φαίνεται καὶ διαρθροῦν τὰ μέλη καὶ σκληρύνειν.

[2] ἀλλὰ καὶ εἰς τὴν ζωογονίαν καὶ εἰς τὴν καρποτοκίαν καὶ πέπανσιν συμμετρίας τινὸς δεῖ τοῦ θερμοῦ καὶ οὐχ ὑπερβολῆς, εἴπερ αὕτη μὲν ξηραίνει καὶ πυκνοῖ μάλλον. ὥστε ταῦτα μὲν ἐν ἀμφιδόξῳ, προσδεόμενα δὲ τινος διορισμοῦ. περὶ δὲ τῶν ἐνύδρων ῥάων ἡ ἀμφισβήτησις· οὐ γὰρ οὔτε γεννᾶν οὔτε εὖ τρέφειν οὔτε σφάζειν πέφυκε τὸ ἐναντίον, ἀλλὰ τὸ ὅμοιον, ἐπεὶ καὶ

Ἐμπεδοκλεῖ πρὸς τοῖς ἄλλοις καὶ τοῦτ' ἄτοπον, ὅπερ καὶ ἐν ἐτέροις εἴρηται, τὸ γεννήσασαν ἐν τῷ ξηρῷ τὴν φύσιν μεταίρειν εἰς τὸ ὑγρόν· πῶς γὰρ ἂν διέμενεν ἢ πῶς οἷόν τε καὶ διαμένειν ὄντιναοῦν χρόνον εἴπερ ἦν ὅμοια τοῖς νῦν;

[3] ἔτι δ' αὐτὸ τὸ συμβαῖνον κατὰ τὴν νῦν γέννησιν ἀποσημαίνει, ἅπαντα γὰρ φαίνεται τὰ ζῶα καὶ τὰ φυτὰ καὶ διαμένοντα καὶ γεννώμενα ἐν τοῖς οἰκείοις τόποις ὁμοίως ἔνδρα καὶ χερσαῖα καὶ εἴ τις ἄλλη τοιαύτη διαφορά. διὸ καὶ ἀπαθὴ μὲν ὑπὸ τούτων παθητικά δ' ὑπὸ τῶν ἐναντίων ἅτε μεγάλης τῆς μεταβολῆς γινομένης.

[4] ἀσύμφωνοι δὲ καὶ αἱ δόξαι πρὸς αὐτάς ὅταν ἅμα τε τὰ ἔνδρα θερμότερα ἢ καὶ τὰ καρπιμώτερα· πολλὰ γὰρ ἄκαρπα τῶν ἐνύδρων· καὶ πάλιν ὅταν τὰ τε πρωῒβλαστῇ καὶ πρωῒκαρπα καὶ τὰ ἀείκαρπα καὶ ἀείφυλλα θερμὰ λέγωσιν· ὀψικαρπότατα γὰρ ὡς εἰπεῖν τὰ ἀείφυλλα. καὶ τὸ ὅλον ὥσπερ πρότερον εἴρηται, <τὰ> πρωῒβλαστῇ καὶ πρωῒκαρπα δι' ἀσθένειαν, ἔνια δὲ καὶ συμπαρακολουθεῖ βλαστάνοντα καὶ ἀνθοῦντα πλείω χρόνον ὥσπερ καὶ ἐν τοῖς ἐπετείοις ὁ ἡριγέρων ἔχων δῆλον ὅτι συμμετρίαν τινὰ κατὰ τὴν ἐπιρροὴν τῆς τροφῆς.

[5] ὁ δὲ προσεπιλέγει περὶ τῶν πυρείων οὐκ ἂν τις ἴσως φαίη θερμότητος, ἀλλὰ ξηρότητος εἶναι σημεῖον· ἡ γὰρ τρίψις ἐστὶν ἡ ποιοῦσα τὸ πῦρ· σφοδρότερα δὲ ἐν τούτοις, ἢ καὶ μᾶλλον ἐξαεροῦν δυναμένη τὸ ὑγρόν. ἀλλὰ δὴ μάλιστα ἐκεῖνα φαίνεται καὶ κατὰ τὴν αἴσθησιν θερμὰ καὶ κατὰ λόγον τὰ λιπαρά τε καὶ τὰ δριμέα καὶ εὖοσμα οὕτως ἔχει· πάντα γὰρ ταῦτα ἐν θερμότητι δοκεῖ εἶναι. διὸ καὶ ξηρά τε ὄντα καὶ ὡς ἐπὶ πᾶν πυκνὰ καὶ ἀσαπῇ καὶ τοὺς χυλοὺς ἔχοντα λιπαροὺς καὶ δριμεῖς· [ὄθεν τέ ἐστι καὶ ἄφρων·] καὶ ἡ πεύκη θερμὴ καὶ εὐπύρωτός ἐστιν· οὐ μὴν μόνον γε ταῦτα, ἀλλὰ καὶ ἄλλα δοκεῖ θερμὰ εἶναι καθάπερ καὶ ἡ φίλυρα καὶ ὅλως ὅσα τὴν τοῦ σιδήρου βαφὴν ἀνίσχουσιν.

[6] χρὴ δὲ καὶ ταῖς τοιαύταις δυνάμεσιν ἀθρεῖν τὰ θερμὰ καὶ ἐπικρίνειν. οἷον ὅσα κατὰ τὰς προσφορὰς τοῖς σώμασι θερμότητάς τινας ἐμποιεῖ καὶ πέψεις ἢ συντήξεις ἢ καὶ τὸ ὅλον κατὰ τὴν ἀφὴν καὶ τὴν γεῦσιν διαδίδωσι τὴν αἴσθησιν· οὐ γὰρ ἔτι ταῦτα λόγου δεῖται πρὸς τὴν πίστιν, ἀλλὰ καὶ ἡ τῶν ἱατρῶν χρεια μαρτυρεῖ καὶ ἡ αἴσθησις· ὡς δ' ἐπὶ τὸ πᾶν πλείω ταῦτα ἐν τοῖς θερμοῖς ἢ ψυχροῖς ἢ οὐκ ἐλάττω γίνεται· διὸ καὶ πρὸς τὴν ἐν τοῖς ἐναντίοις γένεσιν καὶ τοῦτ' ἀμφισβητεῖται.

[7] τὸ μέντοι παρέπεσθαί τινα τροφὴν εἰς τὸ διαμένειν ἐν τοῖς ψυχροῖς ἔνια

τῶν θερμῶν τάχ' ἂν τις συγχωρήσειεν· ἀλλὰ τὰ ποῖα καὶ πῶς τοῦτο πειρατέον διορίζειν, εἰ μὴ ἄρα ἀπλῶς ἰσχύϊ τινὶ μᾶλλον ἢ ῥιζῶν ἢ τῶν ὅλων σωμάτων ἢ διαμονή, καθάπερ καὶ τῆς ἀπίου καὶ τῆς ἀχράδος καὶ τῆς ἀμυγδαλῆς, ἃ δὴ καὶ ἥκιστα ἐκπύγνυται. καὶ περὶ μὲν θερμότητος ἐκ τούτων ληπτέος ὁ διορισμός.

Liber II

[1] Περὶ δὲ τὰς βλαστήσεις καὶ καρποτοκίας τῶν δένδρων καὶ ἀπλῶς τῶν φυτῶν ὅσα μὴ πρότερον εἴρηται πειρατέον ὁμοίως ἀποδοῦναι διαιρουντες χωρὶς ἕκαστα τὰ τε κατὰ τὰς ἐνιαυσίους ὥρας γινόμενα καὶ ὅσα κατὰ τὰς γεωργικὰς θεραπείας. Δύο γὰρ δὴ μέρη ταῦτ' ἐστὶ, τὸ μὲν ὥσπερ φυσικὸν καὶ αὐτόματον τὸ δὲ τέχνης καὶ παρασκευῆς δεόμενον εἰς τὸ εἶναι· ὁ λόγος δ' ἀμφοῖν ἐστὶν οὐχ ὁ αὐτὸς ἀλλ' ὁ μὲν οἶον φυσικὸς ὁ δὲ ἐπινοητικὸς· οὔτε γὰρ ἡ φύσις οὐθὲν (ποιεῖ) μάτην ἢ τε διάνοια βοηθεῖν θέλει τῇ φύσει. Ἐπεὶ δὲ πρότερον τὰ τῆς φύσεως ὑπὲρ τούτων καὶ ῥητέον πρότερον.

[2] Μέγιστον μὲν οὖν ὥς ἀπλῶς εἰπεῖν παντὶ δένδρῳ καὶ ἡμέρῳ καὶ ἀγρίῳ καὶ ὅλῳ δὲ φυτῷ παντὶ πρὸς εὐβλάστειαν καὶ εὐκαρπίαν τὸ χειμασθῆναι χειμῶσιν ὠραίοις καὶ καλοῖς· οὕτω γὰρ αἱ βλαστήσεις κάλλισται καὶ αἱ καρποτοκίαι γίνονται. Καλὸς δὲ χειμὼν ἐὰν πολυϋδρίαν τε ἔχῃ βόρειον καὶ χιόνος πλῆθος καὶ τὸ ὅλον ψύχῃ χωρὶς πάγου· δεῖ γὰρ κεκενωμένα τὰ δένδρα μετὰ τοὺς καρποὺς ἀντιπληρωθῆναι πάλιν τῆς τροφῆς καὶ ταύτην πέψαι καὶ κατασχεῖν εἴπερ εὐβλαστὴ καὶ εὐκαρπα μέλλει γενήσεσθαι.

[3] Τροφῆς μὲν οὖν πλῆθος ἐν ὄμβρου πλήθει, τὸ δὲ κατασχεῖν καὶ πέψαι ταύτην ἐὰν ὁ χειμὼν πίεσῃ καὶ μὴ εὐθὺς ἡ ἐκδρομὴ γένηται. Τὰς γὰρ ρίζας ὀρεγομένας ἀφθόνου τροφῆς διαδιδόναι δεῖ παντὶ τῷ δένδρῳ καὶ ταύτην ὥσπερ κυουμένην καὶ πεττομένην χρόνον λαμβάνειν σύμμετρον. Οὐκ ἔσται δὲ τοῦτο ἐὰν μὴ κατάσχῃ τὰ ψύχῃ· τάχῃ γὰρ ἡ μαλακότης τοῦ ἀέρος ἐκκαλεῖται τὴν βλάστησιν· δι' ὃ τοὺς τε ὄμβρους συμφέρει βορείους μὴ νοτίους εἶναι καὶ πλῆθος χιόνος ὅπως τηκομένη κατὰ μικρὸν διαδύηται πρὸς τὸ ἔδαφος καὶ μὴ ἀθρόον τὸ ὑγρὸν ἀπορρυτὴ προσπεσὸν ἅμα τε καὶ τὴν γῆν ἀναζυμοῖ συγκατακλείουσα καὶ ἐναπολαμβάνουσα τὸ θερμόν.

[4] Ὁ καὶ τοῖς σπέρμασι συμφέρει· ριζωθέντα γὰρ καὶ ἐπισχύσαντα τῇ πιλῆσει καὶ τῇ καταπίεσει τοῦ ψύχους ἅμα τῇ διαγελώσει ταχείας ποιεῖ καὶ ἀθρόας τὰς ἀναδόσεις. Ἀλλὰ τὰ μὲν σπέρματα προσεπιζητεῖ καὶ τοὺς ἡρινοὺς ὑετοὺς μᾶλλον κατὰ μικρά τε καὶ πλείους γινομένους διὰ τὴν ἀσθένειαν καὶ τὸ ἐπιπόλαιον τῶν ριζῶν· ταχὺ γὰρ ἀναξηραίνονται καὶ ταχὺ πάλιν δέονται· τὰ δὲ δένδρα καὶ ἰσχυρότερα καὶ βαθυρριζότερα καὶ ἅμα διάπλεα τροφῆς ἐν ἑαυτοῖς ὥστε τρόπον τινὰ μᾶλλον τοῦ συνεργήσοντος δεῖσθαι πρὸς τὴν πέψιν καὶ τὴν βλάστησιν· σημεῖον δὲ τὸ μὴ βλαστάνειν πρὸ τοῦ ἤρος.

[5] Ὅτι δὲ ἡ πολυϋδρία συμφέρει τοῖς δένδροις κάκεῖθεν φανερόν· ἐν γὰρ

ταῖς ἐπομβρίαις ἅπανθ' ὥς εἰπεῖν εὐσθενεῖ μᾶλλον. Ἀλλ' ὅταν μὲν ὧσι νότια διυγραίνονται καὶ ἀσθενέστερα γίνονται βορείων δ' οὐσῶν ἰσχυρά τε καὶ ἐκπέττει μᾶλλον ἅτε τῆς μὲν γῆς διακόρου οὔσης αὐτά τε ξυνεστῶτα μᾶλλον καὶ ἐναπειληφότα τὸ οἰκεῖον θερμόν. Ὅπου γὰρ αἰεὶ μάλιστα μαλακὸς ὁ ἀήρ ἐνταῦθ' ἡ εὐβλαστία καὶ εὐκαρπία γίνεται τῶν δένδρων ὥσπερ ἐν Αἰγύπτῳ διὰ τε τὴν εὐτροφίαν καὶ διὰ τὸ μὴδὲν ἀντικόπτειν τῶν ἔξωθεν· ἀφθόνου γὰρ τῆς τροφῆς οὔσης καὶ τοῦ ἀέρος εὐτρόφου εὐλόγως ἡ εὐβλαστία καὶ εὐκαρπία. Πρὸς δὲ τὸ ποιοῦν αὐτῶν ἢ πάντων ἢ τινων δεῖται τινος ἴσως ἑτέρας κράσεως.

[6] Ἐνταῦθα δὲ ἐὰν μὴ καθ' ὥραν ἔτους αἱ βλαστήσεις ὧσιν ἀλλὰ προεκδραμῶσιν δι' εὐτροφίαν καὶ ἄνεσιν τοῦ ἀέρος ἐπιγινόμενα ψύχη διελυμήνατο καὶ ἀπέκασεν δι' ὃ καὶ ὀπισθοχειμῶνες χαλεποὶ τοῖς δένδροις· ὅταν γὰρ ἅπαξ ἐκτέκωσιν εὐθὺς οἱ καρποὶ μαλακοῦ τινος ἀέρος δέονται καὶ εὐμενοῦς εἰς τὴν ἐκτροφὴν καὶ μάλιστ' ἐν ταῖς ἀρχαῖς· τότε γὰρ ἀσθενέστατοι, τὸ δὲ ἀσθενὲς οἷον τιτηνῆσεως δεῖται· καὶ γὰρ ὅλως πᾶσα μεταβολὴ καὶ γένεσις δεῖται τῆς τοιαύτης εὐκρασίας.

[7] Μεταβολαὶ δὲ ἅμα καὶ ὥσπερ γενέσεις τινὲς ἢ τε βλάστησις καὶ ἢ ἄνθησις καὶ εἴ τι τοιοῦτον ἕτερον ἐν αἷς καὶ πλεῖσται φθοραὶ γίνονται τῶν καρπῶν ἐρυσιβουμένων τε καὶ ἀποκαομένων καὶ ἀποπιπτόντων καὶ τὸ ὅλον χειμαζομένων. Ἐπεὶ καὶ τὰ ἄγρια μάλιστα συμβαίνει πονεῖν ὅταν μάλιστα ἀρτιβλαστῶν ὄντων ἐπιγίνηται τι πνεῦμα ψυχρὸν ἄγαν ἢ θερμόν· ἀποκάει γὰρ ἅμφω καὶ ἀπόλλυσιν. Ἀλλὰ ταῦτα μὲν ἐν τοῖς καθ' ἕκαστα δεῖ θεωρεῖν. Ἡ δὲ ὅλη διάθεσις καὶ κατάστασις τοῦ ἀέρος εἰς τὴν τῶν δένδρων εὐσθένειαν ὅτι ταύτη ξυμφέρει φανερόν ἐστι διὰ τῶν εἰρημένων.

[2.1] Ἐπόμενον δὲ πως τούτοις ἐστὶ περὶ τῶν ὡραίων ὑδάτων εἰπεῖν. Ὁραιότατα μὲν γὰρ τὰ χειμερινὰ διὰ τὰς λεχθείσας αἰτίας. Δεύτερα δὲ τὰ πρὸ τῆς βλαστήσεως· οὕτω γὰρ ἁθροωτέρα τε καὶ καλλίων ἢ βλάστησις ἐκπληρωθέντων πάντων ταῖς τροφαῖς· εἰ δὲ μὴ ἀβλαστεῖς καὶ ἄμπελοι γίνονται καὶ τᾶλλα τῶν μὲν ἐχόντων τῶν δὲ λειπομένων. Τρίτα δὲ (τὰ) μετὰ τὴν ἀπάνθησιν ἢ πρὸς τὴν ἐκτροφὴν ἤδη καὶ τελείωσιν ἐστὶ, ταῦτα δὲ μὴ εὐθὺς ἀλλ' ὅταν ὁ καρπὸς ἰσχύσῃ· εἰ δὲ μὴ συμβαίνει τὰ μὲν ἄλλα καὶ ἀπορρεῖν καὶ μὴ τοῦτο πάθῃ διυγραίνόμενα χεῖρω καὶ ἀσθενέστερα γίνεσθαι τὴν δ' ἐλάαν καὶ ἐπιβλαστοῦσαν ἀποβάλλειν ἅτε τῆς τροφῆς ἰούσης εἰς τὸν βλαστόν.

[2] Ἀώρια μὲν οὖν ταῦτα. Χεῖριστα δὲ καὶ παρακαιρότατα (τὰ) περὶ τὰς

ἀνθήσεις ἐκάστων. Τὰ ἄνθη γὰρ ἀσθενῇ καὶ ἀνθ' ὡς εἰπεῖν ἢ τὰ γε πλεῖστα ἀπόλλυται καὶ ἀποπίπτει τὰ μὲν ἐρυσιβούμενα τὰ δὲ ὑγραινόμενα τὰ δὲ ἐπιμένοντα χειρὸν ἀνθεῖ. Καὶ τοῦτ' οὐχ ἥττον ἐστὶν ἐν τοῖς φρυγανικοῖς καὶ τοῖς ποιωδέσι πλὴν εἴ τινων ὀλίγων οἶον τὰ στεφανωτικά καὶ ὅλως τὰ ἄγρια καὶ αὐτόματα τῶν ἀνθῶν ἔτι δὲ τῶν ποιωδῶν ἔνια καὶ τῶν ἡμέρων σπερμάτων τὰ χεδροπά· ταῦτα δὲ διαμένει δυοῖν θάτερον ἢ δι' ἰσχὺν ἑαυτῶν τε καὶ τῶν προσφύσεων, καθάπερ καὶ τὸ ρόδον καὶ τὸ κρίνον καὶ τὰ ἄλλα ὅσα τούτοις ὅμοια, ἢ διὰ ξηρότητα τῆς ὅλης φύσεως ἀναλαμβάνοντων τὸ ὑγρόν· ἐπικρατεῖ γὰρ οὕτω τὸ δ' ἐπικρατοῦν ἀπαθές.

[3] Ὡν δὲ οἱ καρποὶ χρονιώτεροι καὶ πλείονος δεόμενοι τροφῆς καὶ πέψεως τούτοις ὥραϊα καὶ τὰ ὀψιαίτερα καθάπερ ἀμπέλῳ, ρόῳ, ἐλάῳ, τοῖς ἄλλοις, ἀπλῶς δὲ ἐκάστοις πρὸς τὴν αὐτοῦ τελείωσιν. Δι' ὃ καὶ οὐχ ὁ αὐτὸς ἅπασι καιρὸς ὥσπερ ὁ τοῦ χειμῶνος πρὸς τὴν βλάστησιν ἀλλ' ἕτερος τοῖς ὀψικάρποις καὶ πρωϊκάρποις, ὥσπερ καὶ τῶν σπερμάτων τοῖς τριμήνοις καὶ ἀπλῶς τοῖς ὀψίοις καὶ πρωίοις. Ἀπλῶς δ' αἰεὶ τὰ βόρεια βελτίω τῶν νοτίων· καὶ γὰρ ψυχρότερα καὶ τὴν ἀπόλαυσιν ποιεῖν πλείω ξυνεσθηκότων καὶ ἰσχυόντων καὶ τῶν καρπῶν καὶ τῶν δένδρων.

[4] Δι' ὃ καὶ τὰ ἐπιγινόμενα πνεύματα ὠφελεῖ καὶ μάλιστ' ἐὰν ἢ βόρεια· περιαιρεῖ γὰρ ταῦτα καὶ ἀπόλαυσιν ποιεῖ πλείω, ἔτι δὲ ἀφαιρεῖ τὸ περιττὸν καὶ ἀποξηραίνει καὶ οὐκ ἔῃ προσκαθήμενον διυγραίνειν οὐδ' ὑπὸ τοῦ ἡλίου συνεψόμενον λυμαίνεσθαι. Διὰ ταῦτα γὰρ καὶ τὰ παραπλήσια καὶ τὰ νυκτερινὰ βελτίω τῶν ἡμερινῶν· ἀπόλαυσίς τε γὰρ γίνεται πλείων μὴ εὐθὺς ἀφαιρουμένου τοῦ ἡλίου καὶ τῶν ἄλλων ἀκινδυνότερα.

[3.1] Τὸν αὐτὸν δὲ τρόπον καὶ τῶν πνευμάτων τὰ βόρεια τῶν νοτίων βελτίω καὶ τὰ πόντια τῶν ἀπογείων ὅτι ψυχρότερα καὶ τὰ ἀπὸ δύσεως τῶν ἀφ' ἑφών. Καθόλου γὰρ ὡς εἰπεῖν τὰ ψυχρὰ τῶν θερμῶν ἐὰν μὴ ἀρτιβλαστῇ ἢ ἢ καὶ ἐν ἀνθήσει λαμβάνῃ· τότε γὰρ ἀποκάει τὰ ψυχρὰ καθάπερ εἴρηται. Βελτίω δὲ καὶ τὰ ξεφύρια καὶ αἱ τροπαὶ καὶ ὅλως αἱ αὔραι τῶν σκληρῶν καὶ διατόνων· τὰ μὲν γὰρ τρέφει θάτερον δὲ πιλοῖ καὶ κωλύει τὰς αὐξήσεις. Ἰσχύει δ' ἕκαστον κατὰ τὴν θέσιν τῆς χώρας· ἄλλα γὰρ ἄλλοις τοιαῦτα καθάπερ ἐλέχθη καὶ πρότερον· δι' ὃ καὶ ὡς μὲν ἐπίπαν εἰπεῖν βελτίω τὰ βόρεια τῶν νοτίων.

[2] Οὐ μὴν ἀλλ' ἐπεὶπερ αἱ παραλλαγὰὶ καὶ τῆς χώρας ποιοῦσι τὰς δυνάμεις καὶ δεῖ τοῦ μὲν χειμῶνος εἶναι θερμὰ τοῦ δὲ θέρους ψυχρά· βοηθεῖ γὰρ οὕτως ἐκάτερα πρὸς τὰς ὥρας ὥσπερ εἶπομεν, ἐὰν δὲ ὅμοια βλάπτει, ποιεῖ γὰρ ὑπερβολήν. Εὐλόγον δὴ μὴ τὰ αὐτὰ πᾶσιν εὐτροφα καὶ ὠφέλιμα καὶ βλαβερά

γίνεσθαι· δι' ὃ τοῖς μὲν ὁ νότος ἐπισιγῆς τοῖς δ' ὠφέλιμος, ὡσαύτως δὲ καὶ ὁ ζέφυρος καὶ τῶν ἄλλων ἕκαστος. Ἄπασι δὲ χαλεπὰ καθάπερ εἴρηται τὰ κατὰ τὴν βλάστησιν εὐθὺς ἢ θερμὰ λίαν ἢ ψυχρὰ πνέοντα· διαφθείρει γὰρ ἅμφω διὰ τὴν ἀσθένειαν.

[3] Ὡς δὲ τὸ σύνολον εἰπεῖν εὐπνουν εἶναι χρὴ τὸν τόπον· ἕτερος δ' ὁ εὐπνους καὶ ὅλως ὁ προσήνεμος ἀναυξής. Σχεδὸν δ' ὁμολογουμένη τις καὶ ἡ τοῦ ἀέρος διάθεσις ἐστὶ τούτοις· ὁ γὰρ εὐκραῆς ἀήρ ὡς ἀπλῶς εἰπεῖν ἄριστος τοῖς δένδροις εὐβλαστής ὢν καὶ εὐκαρπος, οἱ δὲ περισκελεῖς ἐφ' ἑκάτερα διαφθεύουσιν οἱ μὲν τοὺς καρποὺς οἱ δ' ὅλως καὶ τὰ δένδρα πλὴν ὅσα πέφυκεν οἰκεῖα τούτοις· ἔνια γὰρ δὴ ταῖς ὑπερβολαῖς χαίρει καὶ τὰ μὲν ἐστὶ φιλόθερμα καθάπερ φοῖνιξ, τὰ δὲ φιλόψυχρα μᾶλλον ὥσπερ ὁ κιττὸς καὶ ἡ ἐλάτη· ταῦτα γὰρ ὅλως ἐν τοῖς ἐμπύροις οὐ φύεται, χαλεπῶς δὲ καὶ πύξος καὶ φιλύρα καθάπερ ἐν ταῖς ἱστορίαις εἵπομεν.

[4] Αἴτιον δὲ ἡ θερμότης καὶ ἡ ξηρότης· οἷον γὰρ πῦρ γίνεται, συμμετρίας δὲ τινος δεῖται καὶ τὸ ὅμοιον. Ὡσαύτως δὲ οὐδ' ἐν τοῖς ψυχροῖς ἔνια φύεται τῶν ψυχρῶν διὰ τὴν αὐτὴν αἰτίαν. Ἔστι δὲ καὶ τῶν ἐναντίων δῆλον ὅτι συμμετρία τις πρὸς ἄλληλα ὥστε τὰ μὲν δύνασθαι βλαστάνειν (τὰ δὲ μή)· ἀεὶ γὰρ δεῖ λόγον τινὰ ἔχειν τὴν κρᾶσιν τῆς φύσεως πρὸς τὸ περιέχον. Ἔοικε δὲ κοινὸν εἶναι τοῦτο καὶ ἐπὶ τῶν ζώων· καὶ γὰρ τὰ ζῶα καθ' ἑκάτερον τῶν τόπων ἴδια τυγχάνει τὰ μὲν δεχόμενα τὰ δ' οὐ δεχόμενα τὴν τοῦ ἀέρος διάθεσιν, ὅτε δὲ καὶ τροφὰς οὐκ ἔχοντα τὰς οἰκείας. Ἐνδέχεται γὰρ καὶ τοῦτο κωλύειν ὁμοίως καὶ τὰ ζῶα καὶ τὰ φυτὰ τάχα δὲ καὶ ἐτέρας πλείους αἰτίας αἰ πρὸς τὰς ἰδίας φύσεις εἰσιν ἐναντία.

[5] Μεγίστη δ' οὖν διαφορὰ κατὰ τὰ ἔνυγρὰ καὶ χερσαῖα ζῶα καὶ φυτὰ περὶ ὧν οὐδὲ ζητοῦμεν λόγον ὡς εἰπεῖν πλὴν ὑπὲρ τοῦ πότερα θερμότερα καὶ ψυχρότερα, τοῦτο γὰρ ἀμφισβητεῖται, τὰ δ' ἄλλα ὡς συγκεχωρημένα τῇ φύσει τίθεται. Καίτοι τὰ καθόλου καὶ κοινὰ πρῶτα ἔδει ζητεῖν, εὐρεθέντων γὰρ τούτων καὶ τὰ κατὰ μέρος φανερά. Τοῦτο μὲν οὖν ἴσως κωλύοιτ' ἂν διὰ τὸ χαλεπὸν εἶτε πλείους αἰτίαι τυγχάνουσιν εἶτε μία· περὶ δὲ τῶν ἐν τοῖς καθ' ἕκαστα μᾶλλον εὐποροῦμεν· ἡ γὰρ αἴσθησις δίδωσιν ἀρχὰς ἐπ' ἅμφω καὶ ἔτι μᾶλλον καὶ πλείους ἐπὶ τῶν φυτῶν· ἐμφανέστατα γὰρ τὰ συμβαίνοντα περὶ αὐτά.

[6] Μεγίστη δὲ διαίρεσις κατὰ γε τὸν αὐτὸν τόπον τοῖς ἡμέροις καὶ ἀγρίοις· ἀεὶ γὰρ τὰ [ἡμερὰ] μαλακωτέρους καὶ ὑγροτέρους ζητεῖ τοὺς ἀέρας. Οὐ μὴν ἀλλ' ἑνία γε καὶ τῶν ἡμέρων ἀδυνατεῖ βλαστάνειν ἐν τοῖς θερμοῖς καὶ ψυχροῖς

οὐ μόνον διὰ τὴν ἀσθένειαν ἢ τὴν κρᾶσιν ἀλλὰ δι' ἕτερ' ἅττα καθάπερ ἡ ἐλάα καὶ θερμὸν καὶ πυκνὸν ἐν τοῖς ψυχροῖς διὰ τὸ μετέωρον τῶν ρίζων· ἐμπήγνυται γάρ· ἡ δὲ ἀχρὰς ἐν τοῖς σφόδρα θερμοῖς ὥσπερ περὶ Αἴγυπτον· μοχθηραὶ δὲ καὶ αἱ ἄπιοι καὶ μηλέαι καὶ σπάνιαι. Τὴν δ' αἰτίαν σκεπτέον ἐπεὶ οὐκ ἂν θερμὰ δόξειεν εἶναι.

[7] Τὰ μὲν οὖν ὅλως οὐδὲ βλαστάνειν ἐνιαχοῦ δύναται τὰ δὲ βλαστάνει μὲν ἄκαρπα δὲ γίνεται καθάπερ ἡ περσέα ἡ αἰγυπτία περὶ Ῥόδον, προϊόντι δὲ οὕτω φέρει μὲν ὀλίγον δὲ καὶ καλλικαρπεῖ καὶ γλυκυκαρπεῖ ἐκεῖ μόνον. Ὅμοιως δὲ καὶ ὁ φοῖνιξ καὶ ἔτι μᾶλλον ἐν τοῖς περὶ Βαβυλῶνα καὶ Συρίαν καλλίκαρπος. Ὁ γὰρ ἄηρ διὰ ψυχρότητα τὰ μὲν ὅλως οὐ δέχεται τὰ δὲ ὅσον εἰς βλάστησιν ἔνια δὲ εἰς καρπὸν ὁ δὲ οἰκεῖος ἤδη διατελειοῖ τὰ τῆς φύσεως.

[8] Διὰ τὴν αὐτὴν δ' αἰτίαν οὐδὲ αἱ συκαὶ περὶ Αἴγυπτον οὐδ' ὅλως ἐν ἐκείνοις τοῖς τόποις χρησταί· θερμὸς γὰρ ὢν ἄγαν ὁ ἄηρ περικαίει καὶ οὐ ποιεῖ πέσιν ἄλλ' ἢ ἐκ τῆς γῆς εὐτροφία διυγραίνει μόνον ἀπέπαντος οὔσα, δι' ὃ καὶ τοῖς μεγέθεσι γίνεται μικρά. Τοῦναντίον δὲ ὁ ψυχρὸς· ἐξαιρεῖ γὰρ τὴν ὑγρότητα, τὴν δ' (οὔσαν) οὐ δύναται πρὸς τὴν οἰκείαν πέσιν ἀγαγεῖν ὥσπερ ἐν ταῖς ἐλάαις, δι' ὃ καὶ αἱ μὲν ἄσαρκοι πάμπαν ἐλαιηρότεραι δὲ τῶν ἐν τοῖς ψυχροῖς, αἱ δὲ σαρκώδεις μὲν ἀνέλαιοι δέ· πλείονος γὰρ τοῦτο θερμότητος δεῖται πρὸς τὴν πέσιν. Αἱ μὲν οὖν τοῦ ἀέρος κράσεις καὶ διαθέσεις τοιαύτας τινὰς παρέχονται δυνάμεις.

[4.1] Ἐπεὶ δὲ καὶ τὰ ἐδάφη μεγάλας ἔχει διαφορὰς λεκτέον καὶ περὶ τούτων, καὶ γὰρ αὐτὰ τῆς φύσεώς ἐστιν. Ἀβλαστῇ δὲ δι' ἄμφω γίνεται καὶ διὰ τὸν ἀέρα καὶ διὰ τὴν γῆν πολλάκις· ὅτε μὲν γὰρ τὰ κάτω χρηστότατα τὰ δ' ὑπὲρ γῆς φαῦλα (ὅτε δὲ ὁ μὲν ἄηρ εὐτροφος τὰ δὲ τῆς γῆς φαῦλα) καθάπερ ὅταν ἀμμόδης ἢ κεραμὶς ἢ κατακεκαυμένη τις τυγχάνῃ· ρίζωσιν γὰρ καὶ τροφὴν οὐδεμία τῶν τοιούτων ἔχει. Καὶ σχεδὸν αἱ μὲν ἀβλαστεῖς εἰσιν αὗται καὶ εἰ τις ἄρα δίυγρος ὅλως ἢ πηλώδης.

[2] (Τῶν) δὲ βλαστητικῶν καὶ ἐγκάρπων οὐ κακῶς ἢ διαίρεσις ἢ πρὸς τὰ σπέρματα καὶ τὰ δένδρα λέγεται τῇ τὴν μὲν πείραν ἀμείνω σιτοφόρον τὴν δὲ λεπτοτέραν δενδροφόρον εἶναι. Λαμβάνει γὰρ ὥσπερ καὶ πρότερον εἵπομεν ὁ σῖτος καὶ ἀπλῶς τὰ ἐπέτεια τὴν ἐπιπολῆς τροφὴν ἣν δεῖ μὴ ὀλίγην μὴδ' εὐξήραντον εἶναι καθάπερ ἐν ταῖς λεπταῖς, τὰ (δὲ) δένδρα διὰ τὸ μεγάλας καὶ ἰσχυρὰς ἔχειν τὰς ρίζας καὶ τὴν ἐκ βάθους.

[3] Αὕτη δὲ ἐν μὲν τῇ πείρᾳ δαψιλῆς λίαν οὔσα βλάστην μὲν ποιεῖ καλὴν καὶ μέγεθος τοῖς δένδροις καρπὸν δ' οὐ ποιεῖ διὰ τὸ μὴ ἐκπέττειν, ἐν δὲ τῇ

λεπτοτέρᾳ ξύμμετρος γίνεται πρὸς ἄμφω καὶ κρατοῦντα τὰ δένδρα δύναται καρποτοκεῖν. Ἡ δὲ πείρα πάμπαν οὐδενὶ ξυμφέρει φυτῷ· ξηραίνει γὰρ μᾶλλον τοῦ δέοντος ὥσπερ καὶ Μενέστωρ φησί· τοιαύτην δ' εἶναι τὴν πλυντρίδα χρῶμα δ' υπόλευκον. Ἀρίστη δὲ δῆλον ὡς ἡ ἄριστα κεκραμένη καὶ ὅλως μανὴ τις οὖσα καὶ μὴ ψυχρὰ καὶ ἔνικμος· καὶ εὐδίοδος γὰρ οὕτω ταῖς ρίζαις ἐστὶ καὶ εὐτροφος ὅπερ βούλονται καὶ αἱ ἡμερώσεις καὶ αἱ κατεργασίαι καὶ κοπρίσεις ποιεῖν.

[4] Ἄλλη δὲ πρὸς ἄλλα τῶν δένδρων ἀρμόττει μᾶλλον ὥσπερ καὶ διαιροῦσιν, ὥσπερ ἡ σπιλὰς καὶ ἔτι μᾶλλον ἡ λευκόγειος ἐλαιοφόρος· ἱκμάδα τε γὰρ ἔχει καὶ πνεῦμα πολὺ δεῖται δὲ καὶ ἀμφοῖν. Ἡ δὲ λειμωνία καὶ ἔφαμμος ἀμπελοφόρος ἀγαθὴ καὶ ὅλως ἥτις ἂν ἢ μανὴ καὶ κούφη καὶ λεπτή καὶ ἔφυδρος οὕτως ὥστε τὸ οὐράνιον ὕδωρ μὴ διῖκνεῖσθαι πρὸς τὸ ἐν αὐτῇ· τροφῆς γὰρ πολλῆς ἡ ἄμπελος δεῖται διὰ τὸ θερμὴ καὶ μανὴ καὶ ὑγρὰ καὶ πολύκαρπος εἶναι· τάχα δὲ καὶ δι' αὐτὰ ταῦτα καὶ πολύκαρπος· ἔτι δὲ οὐκ εὐσηπτοὶ τῶν ὑγρῶν αἱ ρίζαι καθάπερ αἱ τῶν ξηρῶν ὥστε δύνασθαι καὶ ἐπισπᾶσθαι καὶ ἀντέχειν καὶ διαδιδόναι.

[5] Τὸν αὐτὸν δὲ τρόπον καὶ τῶν ἄλλων ἐκάστοις ἐστὶ τις οἰκεία πρὸς τὴν φύσιν καὶ ἡ αὐτὴ τοῖς μὲν μᾶλλον τοῖς δ' ἥττον. Ὡς δ' ἀπλῶς εἰπεῖν τοῖς μὲν πλείοσιν οὐ συμφέρει ἡ πείρα· δοκεῖ γὰρ καταξηραίνειν μᾶλλον τοῦ μετρίου δι' ὃ καὶ πημαίνεσθαι καὶ νοσεῖν· ὅσα δὲ λυπρὰ τούτοις ξυμφέρει· σημεῖον δὲ ὅτι τὰ λάχανα καὶ ὁ δημήτριος καρπὸς ἐν ταῖς τοιαύταις εὐθeneῖ, πάντα δὲ ταῦτα λυπρὰ τῇ φύσει· τὰ γὰρ φύσει λυπρὰ πιωτέρας τροφῆς δεόνται.

[6] Δηλοῦν δὲ οἶονται καὶ τὴν τῶν ἀνθρώπων τοιαύτην φύσιν· τοὺς γὰρ ἐκλίμους καὶ χαίρειν μάλιστα ταύτη καὶ ἐπιδιδόναι πρὸς εὐχροίαν καὶ ἰσχύν· ἰσχνὰ γὰρ ὄντα τὰ σώματα δεῖσθαι τροφῆς πολλῆς καὶ πιείρας· ὑπὸ δὲ τῶν ξηρῶν καὶ λυπρῶν οὐθὲν ὠφελεῖσθαι διὰ τὸ μὴ ἀπολαύειν ἀλλὰ καὶ ἐπικίνδυνα εἶναι πρὸς νόσους ἄλλας τε καὶ μάλιστα δὴ τὰς τῆς κοιλίας. Ὅμοίως δὲ καὶ ἐπὶ τῶν δένδρων ἔχει τοῦτο, πλὴν ταῦτα μὲν ὅμοια διατελεῖ τὸ δὲ σῶμα ὅταν ἀνακομισθῇ μεταβαίνει εἰς τὴν τετριμμένην καὶ ἄκνισον.

[7] Οὗτος μὲν οὖν καθόλου τις διορισμός. Διαφοραὶ δὲ πολλαὶ καὶ τῆς γῆς καὶ τῶν δένδρων, ὥσπερ καὶ τῶν ἀμπέλων ταῖς μὲν ἡ πεδεινὴ ταῖς δ' ἡ ὀρείνη μᾶλλον ἀρμόττει καὶ ἐν αὐταῖς ταύταις αἱ τοιαῖδε ταῖς τοιαῖσδε· μικραὶ δὲ παραλλαγαὶ φαινόμεναι μεγάλως ποιοῦσι ῥοπὰς εἰς τὴν φύσιν. Τὸ δ' ἀπλοῦν ῥάδιον εἰπεῖν ὥσπερ καὶ κελεύουσι τὰ μὲν στερεὰ καὶ πυκνὰ (ἐν τοῖς ξηροῖς καὶ πυκνοῖς) φυτεύειν, τὰ δ' ἄραια καὶ ὑγρὰ ἐν τοῖς μαλακωτέροις καὶ

ἐφυγροτέροις· ἑκατέροις γὰρ οὕτως αἱ τροφαὶ [δὲ] δῆλον ὅτι σύμμετροι, τοῖς μὲν πολλῆς δεομένοις τοῖς δ' ὀλίγῃς.

[8] Καὶ τὸ καθόλου λεχθὲν ὑπὲρ πάντων ἴσως τῶν δένδρων ἀληθὲς ὅτι καθ' ἑκατέρας τὰς χώρας ἑκάτερα δεῖ καὶ τῶν δένδρων φυτεῦειν, ἀλλ' ἐν τοῖς καθ' ἕκαστα τὸ ἀκριβὲς μᾶλλον ἴσως αἰσθητικῆς δεῖται συνέσεως λόγῳ δὲ οὐκ εὐμαρὲς ἀφορίσαι· ἐπεὶ καὶ ταῖς πρὸς τὸν ἥλιον διαφοραῖς οἶον ἀνιόντα ἢ δυόμενον ἢ μεσοῦντα ἢ πῶς ἄλλως ἔχοντα δεῖ μὴ ἀγνοεῖν ποῖα τῶν φυτῶν τὰ οἰκεῖα καὶ ὅλως καὶ τῶν ὁμογενῶν· ὅπερ οἱ γ' ἀμπελουργοὶ πειρῶνται διαιρεῖν ὅταν συνάγκειάν τινα λαβόντες φυτεύσωσιν· οὐ γὰρ ταυτὰ τιθέασιν εἰς ἑκάτερον τὸ μέρος ἀλλὰ διαιροῦσιν καὶ ποιεῖ μεγάλην διαφορὰν οὕτω τε φυτευθέντα καὶ ἀνάπαλιν. Ὀμοίως δὲ τοῦτ' ἔχει καὶ ἐπὶ τῶν λοιπῶν.

[9] Ἀλλ' ὥσπερ ἐλέχθη πρότερον αἰσθητικῆς δεῖται ταῦτα συνέσεως. Ὡς δ' ἀπλῶς εἰπεῖν ἢ μέσῃν ἔχουσα τῶν ἐναντίων κρᾶσιν πυκνοῦ καὶ ἀραιοῦ καὶ ξηροῦ καὶ ὑγροῦ καὶ κούφου καὶ βαρέος, ἔτι δὲ τὰ ἄνω πρὸς τὰ κάτω σύμμετρα τούτοις, πασῶν ἀρίστη πρὸς ἅπαντα ὡς εἰπεῖν δένδρα τε καὶ σπέρματα. Φαίνεται γὰρ ὁμοιότητα ἔχειν τῷ ἀέρι πρὸς τὰς ἄλλας χώρας. Οὐ μὴν ἀλλ' αὐτῶν γε τούτων ἢ πρὸς θάτερον μέρος ἀποκλίνουσα τῆς ἐναντιώσεως κρείττων, ἣν δὴ καὶ ἀπλῶς τίθενται τινες ἀρίστην οἶον τὴν κούφην καὶ μανὴν καὶ ἔνικμον· ἔχει τε γὰρ τροφήν ἐν ἑαυτῇ καὶ εὐδίοδος ἐστὶ ταῖς ρίζαις· ἢ δὲ πυκνὴ καὶ βαρεῖα καὶ ξηρὰ δῆλον ὡς ἐναντία.

[10] Κατὰ δὲ τὰς παραλλαγὰς τῶν ἀντιθέσεων καὶ τὰς πρὸς ἕκαστον ἔξουσιν ἤδη διαφοράς· οἶον ἐὰν ἢ μανὴ μὲν καὶ λεπτὴ βαθύγεως δὲ καὶ ξηρὰ καὶ αὔδρος δενδροφόρος μὲν ἀγαθὴ σιτοφόρος δὲ κακὴ· διὰ γὰρ τὴν μανότητα δίδεισιν εἰς βάθος τὸ χειμερινὸν ὕδωρ ὥστε τὸν μὲν σίτον μὴ ἐφικνεῖσθαι διὰ τὸ ἐπιπολῆς εἶναι τὰ δένδρα δ' εἰς βάθος καθιέντα τὰς ρίζας ἐφικνεῖσθαι καὶ ἔλκειν. Ὡσαύτως δὲ καὶ εἴ τις ἄλλη τοιαύτη διαφορὰ· τὸ γὰρ πρόσφορον ἀποδώσει τινὶ γένει διὰ τὴν παραλλαγὴν.

[11] Οὐκ ἀλόγως δ' οὐδ' ὅσοι ταύτην ἀρίστην ὑπολαμβάνουσιν ἥτις ἂν ἢ θερμὴ τε καὶ ἔνικμος· ἅμφω γὰρ ἔοικεν ἔχειν ἃ δεῖ τροφήν τε καὶ τὸ κατεργαζόμενον. ... εὐλόγως δὲ καὶ μετὰ τὸ πρῶτον ὕδωρ ἀτμίζειν· ἀλλὰ τὴν μὲν ἔνικμον αὐτῆς εἶναι τὴν δὲ ξηράν. Τὴν μὲν οὖν ἔνικμον σιτοφόρον ἀγαθὴν· ἱκανὸν γὰρ ἔχειν πρὸς τὴν ἐκτροφὴν ὑγρὸν τῷ σίτῳ τοῖς δὲ δένδροις ἔλαττον. Τὴν δὲ ξηρὰν σιτοφόρον φαύλην διὰ τὸ μὴ ἔχειν μηδὲ τούτῳ τροφήν ἀρκοῦσαν.

[12] Ἐπὶ ταῦτόν δέ πῶς φέρονται καὶ ὅσοι φασὶ δεῖν πίειράν τε εἶναι καὶ μὴ

παγώδη μηδὲ πυκνὴν μηδ' ἄλμυράν ἀλλὰ τροφίμον καὶ ψαθυράν· τροφήν τε γὰρ οἶονται δεῖν ἔχειν καὶ θερμότητα καὶ ἔτι ταῖς ρίζαις εὐδίοδον εἶναι· πάντα δὲ ταῦτα οἰκεῖα πρὸς αὐξησιν καὶ καρποτοκίαν. Ὅμοίως δὲ καὶ οἱ τὴν μελάγγεων ἐπαινοῦντες ὥσπερ Λεωφάνης· εὐθὺς γὰρ ἀποδιδόναι πειράται τὰς αἰτίας ὅτι δύναται καὶ ὄμβρον καὶ αὐχμὸν φέρειν δοχὸς οὕσα καὶ τοῦ θερμοῦ καὶ τοῦ ὑγροῦ. Τὴν μὲν οὖν ἀρετὴν τῆς χώρας σχεδὸν ὥσπερ εἴρηται διὰ τῶν αὐτῶν πως καὶ τοῖς αὐτοῖς ἐστὶ λαβεῖν ἐν οἷς καὶ ἀποδιδόασιν πάντες. Αἱ διαφοραὶ δ' ἐπεὶ πλείους εἰσὶ καὶ ταύτης καὶ τῶν φυτῶν πειρατέον πρὸς ἕκαστον λαμβάνειν καὶ θεωρεῖν.

[5.1] Τὰς δὲ τῶν ὑδάτων διαφορὰς τῶν ἐπιγείων, καὶ γὰρ ταῦτα οὐ μικρὰν ἔχει μερίδα πρὸς αὐξησιν καὶ τροφήν, ὁμοίως τούτοις ληπτέον. Ὅσα μὲν οὖν ἄλμυρά καὶ νιτρώδη καὶ στυπτηριώδη καὶ εἴ τις ἄλλος· τοιοῦτος χυλὸς ἄτροφα καὶ ἄγονα φυτῶν ὡς ἀπλῶς ἐστὶν εἰπεῖν· πλὴν εἴ τι συγγενὲς αὐτοῖς ἐκτρέφειν δύναται καθάπερ καὶ ἡ θάλαττα· βραχὺ δὲ τι τοῦτο ἢ οὐδὲν ὡς εἰπεῖν ἐστὶν· ἐνιαχοῦ δὲ ποτίμων παραμιγνέντων ἢ ἐκτροφή καθάπερ τοῖς ἐν Θράκῃ θερμοῖς, καθ' αὐτὰ δὲ ὥσπερ καὶ ζῶων καὶ φυτῶν ἄγονα.

[2] Ἡ δὲ θάλαττα πολλὰ καὶ παντοῖα φύει καὶ ἐστὶν ὥσπερ ζῶων τι γένος ἐν αὐτῇ καὶ φυτῶν. Ὅσα δ' ἐν τῇ ἀμπώτει δένδρα μέγεθος ἔχοντα καὶ κάρπον τυγχάνει περὶ τούτων οὐκ ἂν τις ἴσως ἀποδοίῃ τῇ θαλάττῃ τὴν τροφήν ἀλλ' ἐνδέχεσθαι πότιμον ἔλκειν ἐν τῇ γῇ τὰς ρίζας τὴν δὲ θάλατταν ἀβλαβῇ περιέχουσιν εἶναι καθάπερ καὶ τὸ ὕδωρ τοῖς ἐνὶ ὕδατι· ἀλλὰ τούτων μὲν πέρι λόγος ἕτερος. Καὶ ὅσα δὴ πρὸς αὐτῇ τῇ θαλάττῃ φύεται χρῆταί πως τῇ ἄλμυρίδι πρὸς εὐσθένειαν καὶ τροφήν· ἔοικε γὰρ τοῦτο ἰδίον τι γένος εἶναι παρὰ τὰ εἰρημένα καθάπερ ἀνὰ μέσον ὄν[τα].

[3] Τὰ δ' ἄλυσκα τῶν ὑδάτων τρέφει μὲν καὶ τὰ ἔγγεια χεῖρον δὲ τῶν γλυκέων, ἀναυξῇ γὰρ ποιεῖ καὶ ἐπικάει· τὸ δ' ἄλυπότερα τοῖς δένδροις ἢ τοῖς λαχανώδεσιν ἢ ὅλως τοῖς ἐπετείοις εἶναι καθάπερ τινὲς φασιν οὐκ ἄλογον ὅσπερ ἰσχυρότερα· τάχα γὰρ καὶ τισὶ πρόσφορον τὸ ὅλον ὥσπερ τοῖς φοίνιξιν εἶπερ καὶ οἱ ἄλλες παραβαλλόμενοι· παραπλήσιος γὰρ ἢ ὁ αὐτὸς χυλός. Οὐ μὴν ἀλλὰ καὶ τῶν λαχανωδῶν ἐστὶ τισὶ τὰ ἄλυσκα πρόσφορα καθάπερ ῥαφάνω, τευτλίω, πηγάνω, εὐζώμω· βελτίω γὰρ γίνεται τοῖς ἄλυκοις ἀρδόμενα ταῦτα, δι' ὃ πρὸς γε τὴν ῥαφανὸν νίτρον τινὲς παραμιγνύουσιν ἐν τῷ βρέχειν ὥσπερ οἱ ἐν Αἰγύπτῳ καὶ γίνεται πολλῷ γλυκυτέρα καὶ ἀπαλωτέρα καθάπερ καὶ ἡ ἐσπομένη.

[4] Τοῦτο δὲ συμβαίνει καὶ ὅλως ἡ ἄλυκότης πρόσφορος ὅτι πικρότητά τινα

ἔχουσιν ἐν τῇ φύσει ταύτην δὲ διαδιδόμενον καὶ ὥσπερ ἀναστομοῦν τὸ ἀλυκὸν ἐξάγει, δι' ὃ καὶ ἐν ταῖς ἀλμυρίσιν ἢ ῥάφανος ἀρίστη· τὸ δὲ πικρὸν ἄτροφόν τε καὶ δύσχυλον ὥστε ἐξαγομένου τούτου καὶ γλυκυτέρα καὶ ἀπαλωτέρα καὶ εὐαυξεστέρα γίνεται· τὰ δ' ἄλλα χεῖρω διὰ τὸ μὴ ἐξάγειν τὸ ἀλλότριον ἀλλὰ τὸ οἰκεῖον ἐπικάουσα. Δῆλον δ' ὅτι καὶ ἐπὶ τῶν λοιπῶν πικρῶν ὁμοίως ἂν ἔχοι καθάπερ καὶ ὁ κορωνόπους καὶ τὰ κιχώρια. Τοῖς [δὲ] δριμέσιν οἶον κρομύφ, σκορόδφ, τοῖς ἄλλοις οὐκέτι πρόσφορον· οὐ γὰρ ἀφαιρεῖ τὴν δριμύτητα διὰ τὴν ὁμοιότητα τῶν χυλῶν. Τὸ γὰρ ὅμοιον ἐπὶ τὸ ὅμοιον φέρεται καὶ εἰς τοὺς πόρους ἐνδύεται καθάπερ ἐπὶ τῶν καθαιρόντων καὶ ἐξαγόντων τὰς ἐπιχροΐσεις.

[5] Καὶ τὰ μὲν ἀλυκὰ τοῖς τοιούτοις πρόσφορα διὰ τὴν εἰρημένην αἰτίαν. Εἰ δ' ἀληθὲς ὃ ἔλεγεν Ἀνδρσοθένης ὑπὲρ τῶν ἐν Τύλφ τῇ νήσῳ τῇ περὶ τὴν ἐρυθρὰν θάλατταν ὅτι τὰ ναματιαῖα μᾶλλον συμφέρει τῶν οὐρανίων ἀλυκὰ ὄντα καὶ τοῖς δένδροις καὶ πᾶσι τοῖς ἄλλοις, δι' ὃ καὶ ὅταν ὕψι τούτοις ἀποβρέχειν, αἰτίασαιτ' ἂν τις τὴν συνήθειαν· τὸ γὰρ ἔθος ὥσπερ φύσις γέγονε. Συμβαίνει δὲ τὰ μὲν οὐράνια σπάνια γίνεσθαι τούτοις δ' ἐκτρέφεσθαι καὶ τὰ δένδρα καὶ τὸν σῖτον καὶ τᾶλλα δι' ὃ καὶ πᾶσαν ὥραν σπεύρουσι. Ταῦτα μὲν οὖν ὡς ἐξ ὑποθέσεως εἰρήσθω.

[6.1] Τῶν δὲ ποτίμων τὰ ψυχρὰ βέλτιστα· καὶ γὰρ πέψιν ποιεῖ μάλιστα διὰ τὴν ἀντιπερίστασιν τοῦ θερμοῦ καὶ κατάψυξιν ταῖς ρίζαις· δεῖται δὲ τὰ δένδρα ταύτης. Ὅτι δὲ βελτίω σημεῖον τὸ γλυκυτέρα καὶ εὐχυλότερα τοῖς ψυχροῖς ἀρδευόμενα καὶ λάχανα καὶ ρίζας καὶ καρποὺς καὶ τᾶλλα ὁμοίως. Ἔοικε δὲ κατὰ λόγον ἔχειν ὥσπερ καὶ ἐπὶ τῶν ἐκ διὸς ὑδάτων τὰ νυκτερινὰ καὶ τὰ βόρεια καὶ ἐπ' αὐτῶν δὲ τῶν πνευμάτων ὅταν ἦ βόρεια καὶ μὴ νότια καὶ ὅλως ὅταν ψυχρὰ καὶ μὴ θερμά· τὴν γὰρ αὐτὴν ὄνησιν πάντα ἔχει καὶ διὰ τὰς αὐτάς ἀνάγκας· τὰ (γὰρ) θερμὰ διαχεῖ καὶ ἀνυγραίνει καὶ ἀσθενὲς ποιεῖ τὸ σύμφυτον θερμόν.

[2] Ὑπερβολὴ δέ τίς ἐστιν ἴσως καὶ τοῦ ψυχροῦ καὶ πρὸς τροφήν καὶ πρὸς γένεσιν, ὥσπερ καὶ ἐπὶ τῶν ζώων, εἴπερ ἀφαιρεῖται τὴν τοῦ θερμοῦ δύναμιν· ἀφαιρεῖται γὰρ τὴν ζωὴν· οὐ μὴν πολλή γε οὐδ' ἐν πολλοῖς ἂν μὴ τίνα καὶ ἄλλον ἔχη χυμὸν ἀλλότριον· οὐδὲ γὰρ οὐδ' ὅμοια τὰ ἐπὶ τῶν ζώων ἐστὶ τῶν ἐν φυτοῖς· ἐκεῖνα μὲν γὰρ ὅλως ὑπὸ τοῦ ὑγροῦ περιέχεται καὶ ἐν τούτῳ ξυνίσταται ταῦτα δ' ἐν τῇ γῇ καὶ ἐν τῷ ἀέρι· μινυμένου δὲ τοῦ ὕδατος τούτοις οὔτε τὴν ἐκ τῆς γῆς οὔτε τὴν οἰκείαν ἀφαιρεῖται θερμότητα πλὴν γ' εἴ που καὶ ὁ ἀῆρ ὅλος τοιοῦτος· οὕτως γὰρ ἀβλαστὴς καὶ ἄγονος ἡ γῆ τὸ ὅλον.

[3] Τὰ μὲν οὖν ψυχρὰ διὰ ταῦτα βελτίω, τὰ δὲ πότιμα τῶν ἀπότων ὅτι τροφιμώτερα. Μιγνυμένη γὰρ ἡ ἄλμυρις καὶ πᾶς ὁ τοιοῦτος χυλὸς οὐ μόνον ἀτροφίας ἀλλὰ καὶ ἄλλας βλάβας ἐμποιεῖ καθάπερ ἐπὶ τῶν σωμάτων. Ἡ δὲ μίξις τῶν ὑδάτων ἡ τοιαύτη χρήσιμος ὅταν τὸ μὲν ἄγαν σκληρὸν ἦ καὶ ὥσπερ ἄπεπτον καὶ ὠμὸν τὸ δὲ θῆλυ καὶ μαλακὸν ἦ καὶ ἐάν τινα γεώδη συνεπιφέρῃ χυλὸν ὅπερ ἔχει τὰ θολερὰ καὶ κοπριώδη· καὶ γὰρ τῆς τοιαύτης δέονται τροφῆς. Δι' ὃ πολλάκις ἂν ἀρμόσειε λεπτὸν καὶ καθαρὸν μὴ καθαρῷ καὶ παχεῖ καὶ φρεατιαῖον ναματιαίῳ καὶ ῥυτὸν καὶ ὄμβριον λιμναίῳ καὶ ἀπλῶς στασίμῳ.

[4] Θαυμασιώτερον δ' ἂν δόξειεν εἶ τι γλυκὺ καὶ πότιμον ἢ ὅλως ἄτροφον ἢ μὴ τελεσφόρον ἐστὶν ὥσπερ καὶ τὸ περὶ τὴν Πυρραίαν ὃ καὶ ἐν ταῖς ἱστορίαις εἴρηται. Τὴν δ' αἰτίαν ἐν δυσὶν ἂν τις λάβοι τούτων, ἢ ὅτι πάντως ἀσθενὲς ὅπερ οὐκ ἔοικεν, ἐπεὶ καὶ ὁ ἀῆρ δοκεῖ τρέφειν, ἢ ὅτι χυλὸν τινα ἔχει κακοποιὸν ὃς λανθάνει τὴν γεῦσιν ὅπερ ἐκδηλούμενον φαίνεται καὶ ἐπὶ τούτου τοῦ ὕδατος· καὶ γὰρ ἄνθρωποι λουόμενοι λεπροὶ γίνονται καὶ τὰ φυτὰ παραπλησίαν τινὰ λαμβάνει διάθεσιν· οὐ γὰρ δὴ τό γε ἄγαν τρόφιμον λεκτέον ὥς διὰ τὸ μὴ δύνασθαι κρατεῖν ἀτραφῆ καὶ χεῖρω γίνεται. Περὶ μὲν οὖν τούτων ἱκανῶς εἰρήσθω.

[7.1] Τοὺς δὲ τόπους ζητεῖ τοὺς οἰκείους οὐ μόνον τὰ περιττὰ καὶ ἴδια τῶν δένδρων ἀλλὰ καὶ τὰ κοινότερα γινόμενα· τὰ μὲν γὰρ φιλεῖ ξηροὺς τὰ δὲ εὐύδρους τὰ δὲ χειμερινοὺς τὰ δὲ προσεῖλους τὰ δὲ παλισκίους καὶ ὅλως τὰ μὲν ὀρεινοὺς τὰ δὲ ἐλώδεις ὥσπερ καὶ διαιροῦσιν. Οὐκ αἰεὶ δὲ πάντα τοὺς αὐτοὺς ἴσως οὐ δὲ διὰ μίαν αἰτίαν ἀλλὰ διὰ πλείους ὥσπερ καὶ ἐν τοῖς πρότερον ἐλέχθη. Καὶ γὰρ τὸ συγγενὲς τῆς φύσεως ἕκαστον ἄγει πρὸς τὸν οἰκεῖον ἐν ᾧ περ καὶ τὰ αὐτόματα φύεται· τὸ δ' αὐτόματον μηνύει τὴν φύσιν εἴπερ ἐκ τῶν αὐτῶν αἱ τροφαὶ καὶ αἱ γενέσεις. Καὶ αἱ καθ' ἕκαστον διαιρέσεις οἷον ἡ θερμότης καὶ ἡ ψυχρότης καὶ ἡ ξηρότης καὶ ἡ ὑγρότης· ζητεῖ γὰρ τὰ πρόσφορα κατὰ τὴν κρᾶσιν. Ἔτι δὲ ἀσθενῇ καὶ ἰσχυρὰ καὶ βαθύρριζα καὶ ἐπιπολαιόρριζα καὶ εἴ τις ἄλλη διαφορὰ κατὰ τὰ μέρη.

[2] Πολλάκις δὲ καὶ διὰ πλείω τούτων· καὶ ἐνίοτε τὰ μὲν ἔχοντα τὰ δὲ οὐκ ἔχοντα· πάντα γὰρ (οὐ) ταυτά. Ἔτι δὲ καὶ τὰ ὅμοια ζητεῖ τὸ ὅμοιον καὶ τὰ ἀνόμοια μὴ τὸν αὐτὸν ὅταν (μὴ) ἦ τις παραλλαγή τῆς φύσεως. Ἐν οἷς καὶ τὰ περὶ τὴν ἐλάτην καὶ πεύκην ἐστὶν· ἡ μὲν γὰρ χαίρει παλισκίους ἡ δὲ πεύκη τοῖς προσεῖλοις ἐν ἐκείνοις δὲ οὐ φύεται παράπαν ἢ κακῶς. Θερμὰ μὲν ἴσως ἄμφω καθάπερ φασίν, ἀλλ' ἡ μὲν ἐλάτη ξηρὸν ἡ δὲ πεύκη ὑγρόν· σημεῖον δὲ καὶ ἡ

τῆς πίττης γένεσις· ἅμα δ' ὑγρότητος πλῆθος καὶ ὁ πρόσκειλος τόπος οἰκεῖος· πέψις γὰρ οὕτω μᾶλλον· αἰεὶ δὲ κατὰ τὸ ὑπεραῖρον ἢ ὀρεξίς.

[3] Ἡ καὶ δῆλον ὡς ἐν τοῖς δοκοῦσι παραλλάττειν τῶν ὁμογενῶν αἰεὶ τινα ζητητέον τοιαύτην διαφορὰν. Ἐπεὶ ὅσα μὴ ὁμογενῇ τὸν αὐτὸν ζητεῖ καθάπερ ὁ κιττός καὶ τὰ πάρυδρα καὶ ἀλσώδη ῥάδιον εἰπεῖν· ὁ μὲν γὰρ θερμὸς καὶ ξηρὸς, τῶν δὲ ἡ φύσις ὅλως συγγενής. Ἐνια δὲ καὶ τούτων ἐν ταῖς καθ' ἕκαστον διαφοραῖς ἔδειξε τὴν αἰτίαν. Ὅμοίως δὲ καὶ ὅσα φιλόσκεπα τυγχάνει καὶ τῶν ἀγρίων καὶ τῶν ἡμέρων ὥσπερ ἡ ῥόα καὶ ὁ μύρρινος καὶ ὁ μὲν πυκνὸς ὢν καὶ ξηρὸς ἢ δὲ μανὴ καὶ οὐ ξηρὰ·

[4] τὸν μὲν γὰρ καρπὸν ἀμφοτέρα πυρηνώδη καὶ οὐχ ὑγρὸν ἔχει. Τῷ μὲν οὖν ἡλίῳ παραδιδόμενος ταχὺ καταξηραίνεται, σκιατροφούμενος δὲ καὶ μετρίως εἰσλάμποντος σώζει τε τὴν οἰκειὰν ὑγρότητα καὶ πεπαίνει, δι' ὃ καὶ τὰς ῥόας πυκνὰς φυτεῦσαι καὶ τοὺς μυρρίνους ἵνα συσκεπάζωσιν ἄλληλα καὶ προβολὴν ἔχωσι τοῦ ἡλίου· ἅμα δὲ καὶ τῷ μὴ πολύρριζα τυγχάνειν οὐκ ἐνοχλοῦνται κατὰ τὰς τροφάς. Εἰ γὰρ αὖ τὰναντία τις οὕτω φυτεῖοι καθάπερ ἄμπελον καὶ συκὴν οὐκ ἂν ὁμοίως εὐκαρποῖ· ἐνυγρα γὰρ ὄντα καὶ πέψεως δεῖται πλείονος.

[5] Αἱ μὲν οὖν τῶν τόπων παραλλαγὰι διὰ τοιαύτας τινὰς εἰσὶν αἰτίας ὅπου μὴ καὶ ἄλλο τι συμβαίνει κώλυμα καὶ σίνος πρὸς εὐκαρπίαν ὥσπερ περὶ Τάραντα ταῖς ἐλάαις· ἡ γὰρ ἀπνοία κατὰ τὴν ἄνθησιν ἀποκάεται τὰ πολλὰ ἢ ὅταν πνέῃ τοιοῦτόν τι πνεῖ πόντιον ὃ τῇ ἄλμῃ τῇ ἐπιφερομένη κατεσθίει καὶ λυμαίνεται τὰ ἄνθη. Δοκεῖ δὲ καὶ ὁμίχλη τις ἄνευ πνοῆς ἐκβαίνειν ἢ ὅταν ἄψηται τῶν ἀνθῶν ἀποκάει, δι' ὃ καὶ μάντεις θύουσιν ὥστε μὴ ἐκβῆναι καὶ φασὶ κωλύειν. Τὸν αὐτὸν δὲ τρόπον καὶ εἴ τι πάλιν σωτήριον ἢ καὶ πρόσφορόν ἐστι τοῦ ἀέρος· ἐνίστε γὰρ τῶν ἐδαφῶν ὄντων φαύλων ὁ ἀὴρ ἐκτρέπει τὴν εὐκρασίαν καθάπερ ἐλέχθη καὶ τοῖς οἰκειοῖς πνεύμασιν.

[8.1] Εἰ δὲ ἡ γε πέψις τῶν καρπῶν τοῖς μὲν ὑπὸ θερμοῦ δοκεῖ τοῖς δ' ὑπὸ ψυχροῦ γίνεσθαι κατὰ συμβεβηκὸς ἢ γε ὑπὸ τοῦ ψυχροῦ γινομένη. Τὸ γὰρ θερμὸν ἐν ἀμφοῖν πέττει καὶ μία τις ἡ αἰτία, φανερόν δὲ οὐχ ὁμοίως διὰ τὴν ἀντιπερίστασιν. Ὅλως γὰρ πάντων τῶν τοιούτων τὰς αὐτὰς δυνάμεις ὑποληπτέον αἰτίας εἶναι. Ξυμβαίνει δὲ δὴ τοῖς ὀψικάρποις ὑπὸ τοῦ χειμῶνος πεπαίνεσθαι περικαταλαμβανομένοις τῇ ὥρᾳ. Ὀψικάρπα δ' ὥσπερ ἐλέχθη διὰ πλείους αἰτίας. Ὅσα μὲν οὖν ὑγρὰ τῇ φύσει συντονωτέρων δεῖται τῶν ψυχρῶν ὥσπερ ἡ ἄμπελος· οὕτω γὰρ μᾶλλον ἢ πέπανσις. Ὅσα δὲ ξηροκαρπότερα καθάπερ ὁ μύρρινος, καὶ γὰρ τοῦτο τῶν ὀψικάρπων, ἐλαφροτέρων·

ἀποξηραίνει γὰρ καὶ ἀποστύφει τὸ ἄγαν. Ἡ δ' εὐκρασία καὶ ὁ ὑγρότερος καὶ ὁ ὑπὸ νότου ἀῆρ εὐτροφώτατος.

[2] Ἐπεὶ οὐδὲ τὰ ὑγρότερα τῇ φύσει πέττουσιν αἱ ὑπερβολαὶ τῶν χειμῶνων, ἀλλὰ τὰ μὲν ὅλως ἀποξηραίνουσι τῶν δ' ἐξαίρουνται τὸν οἰκεῖον χυλὸν ὥσπερ τῶν συκῶν. Ἀντέχειν δὲ μάλιστα δύναται τὰ τε ἐν ὑγρότητι λιπαρόν τι ἔχοντα καθάπερ τῶν ἀγρίων τὰ μιμαίκυλα καὶ ἔνια γεώδη καὶ στρυφνὰ καὶ ἰσχυρὰ τὴν φύσιν οἷον βάλανος, ἀχράς, οὔον· ὁπὲ γὰρ ταῦτά γε λαμβάνει τὴν οἰκεῖαν ὑγρότητα. Τοιαῦτα δὲ καὶ τὰ μέσπιλα καὶ τὰ μῆλα τὰ ἄγρια καὶ πάνθ' ὅλως (ἂ δύναται ἀφαιρεθέντα) πεπαίνεσθαι καθάπερ ἡ ἀχράς καὶ τὸ οὔον, οὐ τὴν αὐτὴν μὲν πέπανσιν ἦνπερ καὶ ἐπὶ τῷ δένδρῳ τὴν φυσικὴν, ἔχουσιν δὲ τινὰ γλυκύτητα τὴν ποιοῦσαν ἐδῶδιμα, εἴτ' οὖν σῆψιν αὐτὴν χρὴ λέγειν ὥσπερ ἐπὶ τῶν δρυπεπῶν ἐλαῶν φασιν εἶτε καὶ ἄλλην τινὰ διάθεσιν ἦνπεροῦν.

[3] Οὐ μὴν ἀλλ' ἴσως οὐθὲν ἂν κωλύοι καὶ τῇ ἔσωθεν θερμότητι πέττεσθαι καθάπερ τὰ οὔα πεπαυμένης ἤδη τῆς ἐπιρροῆς ἐκ τῶν δένδρων· τότε μὲν γὰρ αἰεί τινος ἐπιούσης οὐκ ἐκράτει κωλυόμενα ἅμα διὰ τὰ ψύχη, μὴ προσγινομένης δ' ἐτέρας ἅμα δὲ καὶ τοῦ θερμοῦ συγκατακλειομένου δι' ἅμφω πέττεται καὶ λαμβάνει τὴν μεταβολήν· ἐπεὶ καὶ οἱ ἐπὶ τῶν δένδρων καρποὶ πεπαινόμενοι καθάπερ οἱ βότρυες ἀφαιρεθέντες γλυκύτεροι γίνονται τοῦ ὕδατῶδους ὑπὸ τοῦ ἡλίου καταξηραινομένου, ἐπ' αὐτῶν δὲ τῶν ἀμπέλων ὅταν ἐπιστρέφωσι ἢ καὶ γηράσαντες ἀποσταφιδωθῶσι.

[4] Σχεδὸν δὲ καὶ ἐν τοῖς ἄλλοις γίνεται τις τοιαύτη μεταβολὴ τῶν μὲν ἐπ' ἔλαττον τῶν δ' ἐπὶ πλεῖον, ἔνια δ' ἐναντίως. Καὶ γὰρ ἐπ' αὐτῶν τῶν δένδρων ἐν τόποις θερμοῖς καὶ οἰκεῖοις ἀπέπαντα (μὴ) ἐπικινισθέντα καὶ ἐπαλειφθέντα ἐλαίῳ καθάπερ καὶ πρότερον ἐλέχθη διὰ τὴν εὐτροφίαν, ὥσπερ καὶ τὰ ἐν Αἰγύπτῳ συκάμινα, τοῦτο δὲ παθόντα καὶ ἀπέρασιν τινὰ ἔλαβεν ὑγροῦ καὶ πνεύματος καὶ τὸ θερμὸν εἰσδέχεται. Τῶν δὲ λαχανωδῶν ἔνια καὶ τὸ ὅλον ἀπέπαντα καὶ ἀμετάβλητα καθάπερ ἡ κολοκύνθη. Πέψεως μὲν οὖν καὶ ἀπεψίας καὶ ἀπλῶς τῶν γινομένων μεταβολῶν ἐν τούτοις αἱ αἰτίαι.

[9.1] Τῶν δὲ δένδρων αὐτῶν αἰεὶ τὰ ἐν τοῖς ἀπνόοις καὶ παλισκίοις ὀρθὰ καὶ ἀστραβῇ καὶ λειότερα καὶ εὐμηκέστερα γίνεται τὸν αὐτὸν δὲ τρόπον κἂν πυκνὰ τυγχάνη πεφυκότα, τὰ δ' ἐν τοῖς εὐπνόοις καὶ προσηγέμοις καὶ εὐεῖλοις ἔτι δὲ μανὰ πεφυκότα ἦττον. Ἡ τε γὰρ εἰς βάθος αὐξησις κωλύει τὸ μῆκος καὶ τὰ πνεύματα τραχύνει καὶ ὄζους ἐμποιεῖ καθάπερ ἐλέχθη διὰ τὴν ἐπίστασιν· ἐκείνοις δὲ ἀφηρημένων τούτων ἢ εἰς τὸ μῆκος αὐξησις μόνη γίνεται·

[2] δι' ὃ καὶ τὰ μὴ ὁμοίως ὀρθοφυῇ μὴδ' εὐμήκη τὴν αὐτὴν διάθεσιν

λαμβάνει τοῖς ὀρθοφύεσι καὶ μακροῖς ὅταν ἐν τόποις γένηται τοιοῦτοις ὥσπερ αἱ δρυς· λεῖται γὰρ καὶ εὐθεῖαι καὶ σχεδὸν ἰσομήκεις γίνονται ταῖς ἐλάταις καθάπερ φασὶ καὶ περὶ τὸν Αἴμον. Ἄμα δὲ καὶ μανότερα καὶ ἀσθενέστερα τὰ τοιαῦτα γίνεται διὰ τὸ μῆτε ὑπὸ τοῦ ἡλίου μῆτε ὑπὸ τῶν πνευμάτων καὶ τοῦ ψύχους λαμβάνειν πύκνωσιν.

[3] Αποβλητικὰ δὲ μάλιστα τῶν καρπῶν πρὶν πεπᾶναι συκὴ καὶ φοῖνιξ καὶ ἀμυγδαλὴ καὶ διὰ τὴν ἐναπόληψιν ὑγρότητός τέ τινος καὶ πνεύματος ὥσπερ συκαῖ τὰ δὲ τῷ τὴν προσάρτησιν ἔχουν ἀσθενῆ τοὺς δ' ὄγκους μείζους ὥσπερ ἢ ἀμυγδαλὴ καὶ μηλέα καὶ ἄπιος· ἱκανὸν γὰρ καὶ ὅτιοῦν διυγρᾶναι καὶ ἀσθενὲς ποιῆσαι· καὶ ἅμα τούτοις γε καὶ πνευμάτων ἐπιγίνεται μέγεθος. Ἡ δὲ ῥοὰ τοῖς μὲν κυτίνοις εὐαπόπτωτος, ἀσθενὴς γὰρ αὐτῶν ἢ πρόσφυσις ὥστε ὅταν ψακάδια καὶ δρόσοι πέσωσιν εἰσδιδόμενα κατὰ τὸ ἄνθος ἀνυγραίνει καὶ ποιεῖ τὴν βολήν· [4] δι' ὃ καὶ κατάγουσι τὰ δένδρα καὶ οὐκ ἀφιδῶσιν εἰς ὕψος ὅπως οἱ κύτινοι μὴ ὀρθοὶ γινόμενοι δέχονται τὸ ὑγρόν· οἱ δὲ καὶ ἀνάπαλιν κελεύουσι φυτεῦν τὰς ῥάβδους τούτου χάριν ὅπως εὐθὺ κατανεύσωσιν. Ὅτι δ' ἡ ὑγρότης αἰτία τῆς ἀποβολῆς κακεῖθεν δῆλον· αἱ γὰρ ἄπιοι καὶ ἀμυγδαλαῖ καὶ μὴ βρέχη νότιος δ' ὁ ἄηρ ἧ καὶ ἐπινεφὴς ἀποβάλλουσι καὶ τὰ ἄνθη καὶ τοὺς πρώτους καρποὺς ἐὰν εὐθὺς μετὰ τὴν ἀπάνθησιν ἧ. Καὶ τούτων μὲν καὶ τῶν τοιούτων ἐν τῇ προσαρτήσῃ τε καὶ τοῖς ὄγκοις ἡ αἰτία.

[5] Τῶν δὲ συκῶν καὶ τῶν φοινίκων οὐκ ἐν τούτοις ἐστὶ μόνον ἀλλὰ καὶ ἐν τῇ αὐτῶν διαστάσει· δι' ὃ καὶ ἐρινάζουσι τὰς συκαῖς· τοῦτο δὲ ποιοῦσιν ὅπως οἱ ψῆνες οἱ ἐκ τῶν ἐρινῶν τῶν ἐπικρεμαννυμένων γινόμενοι διοίγωσι τὰ ἐπὶ τῆς συκῆς· ἡ μὲν γὰρ γένεσις ἐξ ἐκεῖνων· ζητοῦντες δὲ τὴν ὁμοίαν τροφήν ἐκπέτονται καὶ προσίπτανται τοῖς ἐπὶ τῆς συκῆς ἐρινοῖς. Συμβαίνει δὲ τοῦτο καὶ ἐπὶ τῶν (μὴ) ἐριναζομένων ὅταν πλησίον τῶν συκῶν ἐρινεοὶ ᾤσιν, δι' ὃ καὶ παραφυτεύουσι ταῖς συκαῖς ἐρινεοὺς ἐπὶ τῶν ἄκρων ὅπως κατ' ἄνεμον ἢ πτῆσις οὐρία γίνηται, ταῖς μὲν πρωταῖς πρωτίους ταῖς δ' ὀψαῖς ὀψίους ταῖς δὲ μέσαις μέσους ἵνα κατὰ τὴν οἰκείαν ὥραν ἐκάστοις ὁ ἐρινασμός ἧ.

[6] Διοιχθέντος δὲ τοῦ μέσου τὴν ὑγρότητα ἐκβόσκονται τὴν πλειῶν καὶ τῷ ἔξωθεν ἀέρι δίοδον διδῶσι καὶ τὸ ὅλον εὐπνότερα ποιοῦσι· συμβαίνει γὰρ ἅμα τῇ θερμότητι τῇ κατεργαζομένη συγκατακλείεσθαι τι πνεῦμα καθάπερ τοῖς ἐπομένοις οὗ χωρισθέντος ἅμα τῇ ὑγρότητι καὶ διεκπνεύσαντος ἐπιμένει· τὰ γὰρ αἷτια τοῦ ἀποβάλλειν ταῦτ' ἐστίν. Εὐλόγως δὲ καὶ γίνονται καὶ εἰσδύονται πάλιν οἱ ψῆνες εἰς τὰ ἐρινά· γίνονται μὲν γὰρ διὰ τὸ μὴ δύνασθαι πεπαίνειν μηδὲ τελειουργεῖν τοὺς ἐρινεοὺς· ὥσπερ γὰρ καὶ τῶν ἄλλων

σηπομένων και ἐν τούτοις ζωοποιὸς ἡ φύσις· οὐκ ἔχοντες δὲ τροφήν ζητοῦντες δὲ τὴν οἰκείαν φέρονται πρὸς τὸ ὅμοιον· ἡ γὰρ ἐπιθυμία πᾶσι τοῦ συγγενοῦς ὥσπερ τοῖς φθειρσὶν αἵματος ἐξ οὗ διαφθαρέντος (ἡ) γένεσις.

[7] Εὐλόγως δὲ καὶ ἐν τοῖς λεπτογείοις καὶ καταβόρροις οὐκ ἐπιζητοῦσι τὸν ἐρινασμόν· ξηρὰ γὰρ γίνονται τῇ φύσει δι' ὀλιγότητα τῆς τροφῆς, οὐδὲ δὴ εἴ τις ἐτέρα χώρα τοιαύτην ἔχει τὴν κρᾶσιν ὥστε σύμμετρον ἐκδιδόναι τὴν τροφήν· ἡ γὰρ ἀποβολὴ δι' ἀπεψίαν καὶ τὸ μὴ κρατεῖν. Ὡσαύτως δὲ καὶ ὅπου κονιορτὸς πολλὺς, ἀποξηραίνει γὰρ καὶ οὗτος. Ἄτοπον δ' ἂν δόξειεν ὅτι βορείοις ἀποβάλλουσι μᾶλλον ἢ νοτίοις ξηροτέρων ὄντων· αἴτιον δ' ὅτι πυκνούμενα μᾶλλον τὰ ἐρινὰ κωλύεται διεκπνεῖν· ἅμα δ' ἴσως καὶ πῆξις τις γίνεται τοῦ ὁποῦ· ταύτην γὰρ καὶ τῆς φυλλοβολίας αἰτίαν φέρουσί τινες ὥσπερ εἶπομεν.

[8] Ὅσα δ' ὄψια πάμπαν τῶν γενῶν οὐκ ἀποβάλλει διὰ τὴν ὀνιότητα τῆς βλαστήσεως· οὐ γὰρ ἔτι συμβαίνει κατακλείεσθαι καὶ ἐναπολαμβάνεσθαι τὸ πνεῦμα διὰ τὴν ὥραν ἀλλ' ἐπικρατεῖ ἀντιπεριϋστάμενον τὸ θερμόν· ἅμα δὲ καὶ φύσει ξηρὰ πῶς ἐστὶ καὶ ὁψὲ διῶγραινεται, δι' ὃ καὶ τὴν ἄρδευσιν αἱ τοιαῦται ζητοῦσι καὶ δέχονται μᾶλλον. Ἔοικε δ' εἶπερ ἡ ἀνοιξις ποιεῖ τὴν ἐπιμονὴν εὐπνοίαν τε καὶ ἀπέρασιν ποιοῦσα παραπλήσιον τρόπον τινὰ (τὸ) συμβαῖνον καὶ ἐπὶ τῶν ἐν Αἰγύπτῳ συκαμίνων·

[9] ἀλλὰ τοῦτο διαμφισβητοῦσί τινες ὡς ἄρ' οὐκ ἀνοίγουσιν οἱ ψῆνες ἀλλὰ συμμύειν ποιοῦσιν ὅταν εἰσδύωσιν ὅθεν καὶ τὴν αἰτίαν ἐστὶν ἐκ τοῦ ἐναντίου φέρειν ὡς τούτου χάριν ἐριναζομένων· ἐὰν γὰρ συμμύωσιν οὐθ' ἡ δρόσος οὔτε τὰ ψακάδια δύναται διαφθεῖρειν ὑφ' ὧν ἀποπίπτουσι διυγραινόμενοι ὥσπερ καὶ οἱ κύτινοι τῶν ῥοῶν· ὅτι δὲ ταῦτα αἷτια μηνύει τὸ συμβαῖνον ὃ δὴ καὶ λέγουσί τινες· ἀποβάλλουσι γὰρ μᾶλλον ὑδάτιων ἐπιγινομένων. Σημεῖον δ' ὅτι κἀκεῖνό ἐστι τοῦ συμμύσαι χάριν· ἐὰν γὰρ μὴ ἔχῃσι περιάπτειν τῇ ἄμμῳ ἐπιπάττουσιν ἵνα συμμύσῃ· καὶ ὁ κονιορτὸς δὲ ποιεῖ διὰ τοῦτο ἐπιμένειν ὅτι συμμύει κονιορτούμενα· τὰ δὲ τῶν ὀψίων οὐ διοίγεται κατ' ἐκεῖνον τὸν καιρὸν ἀλλὰ συμμύει, δι' ὃ καὶ ἐπιμένει καὶ οὐδὲ ὅλως ἐρινασμοῦ δέονται· μετὰ ταῦτα δ' ἰσχύοντ' ἤδη καὶ ἅμα τῆς ὥρας μεταβεβληκυίας ἀνοίγεται τε καὶ οὐκ ἀποπίπτει. Τὴν μὲν οὖν αἰτίαν ἀμφοτέρως λαβεῖν ἐνδέχεται.

[10] Τάχα δ' ἂν τις φαίη ταῦτά γε οὐδὲν ὑπεναντιοῦσθαι· καὶ γὰρ ὑδάτων ἐπιγινομένων ἀσθενέστερα τὰ ἐρινὰ καὶ πλείων ὑγρότης γίνεται δι' ἣν ἐκπνευματουμένην ἡ ἀποβολή· καὶ τῇ ἄμμῳ πάττειν ἀποξηραίνειν βουλομένους δι' ὃ καὶ τὸν κονιορτὸν ὠφελεῖν· ἐξαιρεῖν γὰρ τὸ ὑγρὸν ὃ τῆς

ἀποβολῆς αἰτίων.

[11] Εἰ μὲν οὖν μὴτὲν ἀντιλέγει δῆλον ὡς ἐν ἐκείνῳ τὸ αἷτιον. Εἰ δὲ ἐναντιοῦται συμβαίνειν ἂν ἐκείνως μὲν ἀπὸ τῶν ἐντὸς εἶναι τὴν ἀρχὴν καὶ εἴ τι προσεπιγίνεται τῶν ἐκτὸς, οὕτως δ' ἀπὸ τῆς ἔξωθεν ὑγρότητος ὅφ' ἥς μάλιστ' ἂν ἀποπίπτει τὰ ὀρθὰ πεφυκότα καὶ μὴ κατακλινῇ καθάπερ οἱ κύτινοι· πιθανὸν δὲ καὶ ἐξ αὐτῶν τινὰς αἰτίας εἶναι τῆς ἀποβολῆς ὥσπερ νοσησάντων πλὴν ἢ μὲν νόσος ἴσως κοινὴ πάντων τῶν καρπῶν.

[12] Τοῦ δὲ συμμύειν ὅταν εἰσδύωσιν οἱ ψῆνες ἀνάγκη τινὰ λέγειν αἰτίαν· ἐπεὶ τό γ' ἐκβόσκεσθαι τὴν ὑγρότητα τὴν ἐνυπάρχουσαν οἰκείαν οὕσαν ἀληθές, δι' ὅπερ πρὸς τὴν ἐπιμονὴν χρήσιμον, τὰ μέντοι σῦκα χεῖρω ποιεῖ· κενωθέντα γὰρ τὰ ἐρίναστα μᾶλλον ἐπισπᾶται καὶ πλείω τὸν ὀπὸν· ὅθεν ἔνιοι γ' οὐδ' ἐρινάζουσιν ἀλλὰ καὶ πωλοῦντες κηρύττουσιν ὡς ἀνερίναστα καὶ δοκεῖ πολὺ διαφέρειν. Ἔτι δ' ἐχρῆν τοῖς βορείοις ἦττον ἀποπίπτειν, συμμύει γὰρ μᾶλλον, εἰ μὴ ἄρα τῷ ξηραίνεσθαι διαχάσκει.

[13] Φαίνεται δ' οὖν πλείους ἀντιλογίας ἔχειν τῶν πρότερον, εἰ μὴ ἄρα ἀμφοτέρως συμβαίνει καὶ ἐνδέχεται. Τὸ δ' ἐνίους τόπους μὴ δεῖσθαι τῶν ἐρίνασμων οὐκ ἄτοπον ὥσπερ ἐλέχθη, συμμετρίαν ἔχοντας τῆς τε τροφῆς (καὶ) τοῦ ἀέρος· ἐπεὶ ὅτι γε ἡ ὑγρότης πολλὴ καθ' ὅλον τὸ γένος καὶ ἐξ αὐτῶν τῶν ἀγρίων δῆλον. Καὶ γὰρ ἡ ἀπεψία διὰ τοῦτο γίνεται καὶ ἐρινάζουσι κάκείνους ὅπως ἐπιμείνωσι· διὰ τὰς αὐτὰς δ' αἰτίας καὶ διαφοροῦσιν ἔνιοι δὲ καὶ τριφοροῦσιν αὐτῶν διὰ πλῆθος τροφῆς· ἀφαιρουμένων γὰρ τῶν πρώτων ῥαδίως ἕτερα φύουσι καὶ πάλιν τούτων ἕτερα πληθύνοντές τε τῇ ὑγρότητι καὶ μέχρι τούτου κρατοῦντες ἐπὶ πλείον δ' οὐ δυνάμενοι διὰ τὴν ὑπερβολήν·

[14] μόνον γὰρ δὴ τοῦτο τῶν ἀγρίων ἢ μετ' ὀλίγων ἀτελεῖ φέρει τὸν καρπὸν· εἰ μὴ ἄρα ἐνταῦθα αὐτῶν ἦν τὸ τέλος. Φύεται γοῦν καὶ αὐτόματος· [ἡ δὲ τῶν αὐτομάτων γένεσις ἐκ σπέρματος καὶ ὅσα δὴ διὰ σῆψιν τινὰ μᾶλλον δ' ἀλλοίωσιν γίνεται τῆς γῆς·] ὥστε καὶ τοῦτο ὠλεσίκαρπον ἂν τις φαίη καθάπερ ὁ ποιητής φησι τὴν ἰτέαν· ἐπεὶ τὰ γε ἄλλα κἂν ἀβρώτους ἔχη πᾶσι τοὺς καρποὺς ὅμως ἐκτελεῖ καὶ πεπαίνει κατὰ τὴν τῆς φύσεως ὁρμήν.

[15] Ἀλλὰ γὰρ αὕτη μὲν ιδιότης ἂν τις εἴη πρὸς τὰ ἄλλα. Τὸ δὲ ἐπὶ τῶν φοινίκων συμβαίνειν οὐ ταῦτόν μὲν ἔχει δὲ τινὰ ὁμοιότητα τούτῳ δι' ὃ καλοῦσιν ὀλυνθάζειν αὐτούς· τὸ γὰρ ἀπὸ τῆς ἄρρενος ἄνθος καὶ ὁ κονιορτὸς καὶ χνοὺς συγκαταπαττόμενος ποιοῦσί τινα τῇ θερμότητι καὶ τῇ ἄλλῃ δυνάμει ξηρότητα καὶ εὐπνοίαν· διὰ τούτων δὲ ἡ ἐπιμονή· φαίνεται δὲ τρόπον τινὰ ὅμοιον τούτῳ καὶ τὸ ἐπὶ τῶν ἰχθύων συμβαίνειν ὅταν ὁ ἄρρην ἐπιρραίνῃ τοῖς

ὥοις ἀποτικτομένοισι τὸν θορόν. Ἀλλὰ τὰς μὲν ὁμοιότητας καὶ ἐκ τῶν ἀπηρητημένων ἐστὶ λαμβάνειν.

[10.1] Τῶν δὲ ὁμογενῶν ἐν οἷς τὰ μὲν ἄκαρπα τὰ δὲ κάρπιμα τῶν ἀγρίων, ἃ δὴ θήλεα τὰ δ' ἄρρενα καλοῦσιν, ἐν ἐκείνῃ τῇ αἰτίᾳ περιλαμβάνεται τῇ καὶ πρότερον εἰρημένη περὶ τῶν ἀκάρπων ὅτι διὰ πυκνότητα καὶ ἰσχὺν καὶ εὐτροφίαν ἄκαρπα γίνεται· συμβαίνει γὰρ ἅπαντα εἰς ἑαυτὰ καταναλίσκειν. Ἡ δὲ καρποτοκία δεῖται μὲν τῆς φυσικῆς περιττώσεως· ἐκ ταύτης γὰρ ὁ καρπὸς ὥσπερ καὶ τοῖς ζώοις τὸ σπέρμα· τρεπομένης δ' εἰς ἕτερον ἀεὶ καὶ ἀναλίσκομένης ἀφαιρεῖται τὴν γένεσιν· ἡ γὰρ φύσις οὐ διαρκὴς εἰς ἄμφω μὴ λαμβάνουσα τὸ σύμμετρον.

[2] Οἷς μὲν οὖν ἐνίστε τοῦτο συμβαίνει τότε ἄκαρπα γίνεται, οἷς δ' εὐθὺς ἐνταῦθα ἡ ὁρμὴ τῆς φύσεως ὅλως ἄκαρπα. Δι' ὃ δὴ καὶ τῶν ἀγρίων ἔνια τοιαῦτ' ἐν τοῖς ὁμογενέσιν ἅπερ ἰσχυρότερα καὶ πυκνότερα καὶ ὥς ἐπὶ πᾶν μείζω γίνεται διὰ τὴν εὐτροφίαν. Ἐπεὶ καὶ τὰ μικρόκαρπα πάνθ' ὥς ἐπὶ τὸ πολὺ μείζω καὶ τὰ εἰς μέγεθος ὠρμημένα μικροκαρπότερα καθάπερ καὶ ἡ ἰνδικὴ συκὴ καλουμένη. Θαυμαστὴ γὰρ οὕσα τῷ μεγέθει μικρόν τε ἔχει φύσει σφόδρα τὸν καρπὸν καὶ ὀλίγον ὥς εἰς τὴν βλάβστησιν ἐξανάλισκουσα πᾶσαν τὴν τροφήν· καὶ γὰρ σφόδρα μεγάλοφυλλος ἀφ' ᾧ ἔοικε διὰ τὴν εὐβοσίαν καὶ ἡ τῶν ῥιζῶν τῶν καθιεμένων εἶναι γένεσις. Ἰσως δ' ἀνάπαλιν ὅτι καὶ εἰς ταῦτα καταμερίζεται, διὰ τοῦτο οὖν ἀσθενέστερός ἐστὶ καὶ ἐλάττων ὁ καρπός· ὑπὲρ δὲ τῶν ῥιζῶν ἐν ἑτέροις εἴρηται.

[3] Μόνα δὲ ἡ μάλιστα τῶν πολυκάρπων αὐξησιν λαμβάνει μεγέθους ἄμπελος καὶ συκὴ· δύναται γὰρ ἡ μὲν ἐφ' ὅσον οὖν ἐφικνεῖσθαι κληματουμένη καὶ ἔδαφος εὐγειον ἔχουσα καὶ εὐτροφον, ἡ δὲ καὶ εἰς ὕψος αἵρεσθαι καὶ πολὺκλαδος γινομένη πολὺν καταλαμβάνειν τόπον.

[11.1] Εὐλόγως δὲ καὶ μακροβιώτερα τὰ ἄκαρπα τῶν καρπίμων καὶ τὰ ὀλιγόκαρπα τῶν πολυκάρπων ὅσα μὴ δι' ἀσθένειαν ἢ ὑγρότητα ἢ δι' ἄλλην τινὰ αἰτίαν ἄκαρπα ἢ ὀλιγόκαρπα καθάπερ τέ τε ἀρύδρα καὶ ἀλσώδη καὶ ὅσα μανὰ καὶ εὐσηπτα καθάπερ ἡ δάφνη· ταῦτα μὲν γὰρ καὶ εἴ τι τοιοῦτον ἄλλο διὰ τὰς εἰρημένας αἰτίας. Ἡ δὲ καρποτοκία πολὺ τῆς φύσεως ἀφαιρεῖ καὶ τὸ κυριώτατον ὅπερ καὶ ἐπὶ τῶν ζώων συμβαίνει· τὰ γὰρ πολυτοκώτατα καὶ γηράσκει τάχιστα καὶ ἀπόλλυται. Φανερόν δὲ ἀμέλει καὶ ἐπ' αὐτῶν ἐστὶ τῶν δένδρων· ὅσα γὰρ πολυφόρα καὶ πολύκαρπα ταῦτα καὶ ὅλως καταγηρᾶ θάπτον καὶ ἐν τοῖς ὁμογενέσιν οἷον ἀμπέλοις, συκαῖς, τοῖς τ' ἄλλοις, τὰ δὲ στέρifa καὶ ὀλιγόκαρπα χρονιώτερα ὥς εἰπεῖν.

[2] Καί ποτε μᾶλλον δὲ πολλάκις ὑπερκαρπήσαντα τὰ δένδρα δι' ἀσθένειαν ἀφανάνθη καὶ μάλιστα τοῦθ' αἱ ἄμπελοι πάσχουσι καὶ τᾶλλα δὲ τὰ πολύκαρπα διὰ τὸ ἐξανηλῶσθαι τὴν φύσιν εἰς τοὺς καρποὺς (ὅ) καὶ τοῖς σιτηροῖς σπέρμασι καὶ ὅλως τοῖς ἐπετείοις συμβαίνει, δι' ὃ καὶ ἐπέτεια· συνεξαυαίνονται γὰρ εὐθὺς αἱ ῥίζαι τελειουμένων τῶν καρπῶν διὰ τὰς αὐτὰς ἀνάγκας ἐκδιδομένης πάσης τῆς φύσεως. Τὰ δὲ δένδρα παραχρήμα μὲν ἢ οὐ πάσχει τοῦτο ἢ οὐ φανερὰ γίνεται περιϋσταμένης δὲ τῆς ὥρας ἐξεδήλωσεν. Ἐὰν δέ τι καὶ ἐπιγένηται τοιοῦτον ἐκ τοῦ ἀέρος ὥστε πιέσαι καὶ κακῶσαι καὶ θᾶπτον.

[3] Οὐ μόνον (δ') οὕτω τὰ ὑπερκαρπήσαντα ἀλλὰ καὶ τὰ πολυκαρπήσαντα πονεῖ πολλάκις δὲ καὶ φθείρεται· κενωθὲν γὰρ ἅπαν ἀσθενὲς ἐν ἀσθενεῖ δὲ καὶ τὸ μὴ ἰσχυρόν· διὰ τοῦτο καὶ τὰ γεωργούμενα τῶν ἀγεωργήτων θᾶπτον γηράσκει καὶ τὰ βελτίω τῶν χειρόνων καὶ τὰ ἥμερα ὅλως τῶν ἀγρίων· καίτοι τάχ' ἂν δόξειεν ἄτοπον εἰ τὰ μᾶλλον τυγχάνοντα θεραπείας· ἀλλ' ἡ θεραπεία πρὸς καρπογονίαν οὐ πρὸς ἰσχύν· αὕτη δὲ ἀναιρεῖ, τὸ δὲ μακρόβιον ἐν τῷ ἰσχύειν, ἰσχυρόν δὲ τὸ πυκνὸν καὶ στέριφον. Ὅθεν καὶ Θάσιοι τὰς γεωργίας ἀπομισθοῦντες οὐ φροντίζουσι τῶν ἄλλων ἐτῶν ἀλλὰ καὶ βούλονται κακουργεῖν ὑπὲρ δὲ τοῦ τελευταίου συγγράφονται πρὸς τὴν αὐτῶν κατάληψιν.

[4] Συμβαίνει δὲ τοῦτο καὶ ἐπὶ τῶν ζώων· καὶ γὰρ τὰ ὅλως εὐτοκα βραχύβια καὶ τὰ ὑπερτοκήσαντα πολλάκις ἀπόλλυται καὶ μάλιστα εἴ τι ἀεὶ ὥς τῶν γε συνανθρωπευομένων αἱ ὀρνιθεῖς· αὕτη τε δὴ βραχυβιότητος αἰτία καὶ ἡ ἐναντία δηλὸν ὅτι μακροβιότητος ὥσπερ εἴρηται. Καὶ ὅσα δι' ἀσθένειαν εὐφθαρτα, μὴ πάντως ὄντα πολύκαρπα ἀλλ' ἓνια καὶ ἄκαρπα καθάπερ ἐν τοῖς ἐπετείοις [ὥς] ἡ σικύα περὶ ἧς καὶ πρότερον ἐλέχθη· ταῦτα γὰρ οὐδ' εἰς τελείωσιν ἀφικνεῖσθαι δύνανται τῆς φύσεως. Ἐνια δὲ καὶ τῶν δένδρων εὐφθαρτα διὰ μανότητα καὶ ἀσθένειαν οὐκ ὄντα πολύκαρπα καθάπερ ἡ δάφνη· ταύτης γάρ ἐστιν ἢ καὶ ἄκαρπος ὅλως ἡ βρυοφόρος.

[5] Πλὴν οὐχ ἀπλῶς ταύτη γε ἀλλὰ κατὰ μέρος καὶ ἡ φθορὰ καὶ τὸ γήρας· ἀεὶ γὰρ τὸ μάλιστα παχυνόμενον ὥς εἰπεῖν σήπεται καὶ φθείρεται. Παραβλαστήσεις δὲ ἔχει πολλὰς ὥς ὅμοιον εἶναι τρόπον τινὰ τοῖς ἀφαναινομένοις ἀκρεμόσιν ἐπὶ τῶν δένδρων· ἀλλ' ἡ διαφορὰ τοῖς μὲν ὅτι τὸ κυριώτατον τοῖς δὲ τῶν ἀπηρητημένων τι μορίων, ἀλλ' ὅτι ἡ παραβλάστησις ἀπὸ τῶν αὐτῶν διὰ τοῦτο καὶ ταὐτὸ δοκεῖ (καὶ) τὸ δένδρον εἶναι περὶ οὗ καὶ διηπορήθη πρότερον.

[6] Ἀρχαὶ δὲ φθορᾶς τοῖς ἀσθενέσι καὶ ἀπὸ πληγῆς καὶ ἀπὸ πνευμάτων

μεγέθους καὶ ἀφ' ἐτέρων τινῶν τοιούτων· ἐκ πολλῶν γὰρ εὐκίνητον τὸ ἀσθενές. Ἐὰν δὲ πρὸς τούτῳ καὶ πολύκαρπον ἢ καθάπερ ἡ ῥόα καὶ μηλέα ἢ ἑαρινή καὶ μᾶλλον· ἐξ ἀμφοτέρων γὰρ τάχα δ' ἐκ πολλῶν αἱ ἀρχαί. Καὶ αἱ γε μηλέαι καὶ σκωληκοῦνται τάχιστα θᾶττον δὲ αἱ γλυκεῖαι. Καὶ τοῦτο πάσχουσι καὶ ὅλως γηράσκουσιν οὐχ αἱ μηλέαι μόναι ἀλλὰ καὶ αἱ ῥοαί· τὸ γὰρ ποτιμώτατον ἀφαιρεῖται τῆς φύσεως. Ἄμα δὲ καὶ αἱ μὲν ὥσπερ ἄγριαί τινες αἱ δ' ἡμεροὶ τυγχάνουσιν.

[7] Ἀνὰ λόγον δὲ καὶ αἱ ἀπύρηνοι τῶν πυρηνωδῶν καὶ αἱ μαλακοπύρηνοι τῶν σκληρῶν, καὶ ἐπὶ μυρρίνων δὲ καὶ τῶν ἄλλων ὡσαύτως· καὶ γὰρ πλεῖον ἀφαιρεῖται τῆς φύσεως καὶ τὸ ὅλον ἀσθενέστερα καὶ μανότερα ταῦτα δι' ὃ καὶ πρωϊκαρπότερα· θᾶττον γὰρ καὶ μᾶλλον ὑπακούει τῷ ἀέρι τὸ ἀσθενές· ὥς δὲ Δημόκριτος αἰτιᾶται τὰ εὐθέα τῶν σκολίων βραχυβιώτερα καὶ πρωϊβλαστότερα διὰ τὰς αὐτὰς ἀνάγκας εἶναι, - τοῖς μὲν γὰρ ταχὺ διαπέμπεσθαι τὴν τροφήν ἀφ' ἧς ἡ βλάστησις καὶ οἱ καρποὶ, τοῖς δὲ βραδέως διὰ τὸ μὴ εὗρουν εἶναι τὸ ὑπὲρ γῆς ἀλλ' αὐτὰς τὰς ρίζας ἀπολαύειν, καὶ γὰρ μακρόρριζα ταῦτα εἶναι καὶ παχύρριζα, - δόξειεν ἂν οὐ καλῶς λέγειν.

[8] Καὶ γὰρ τὰς ρίζας ἀσθενεῖς φησιν εἶναι τῶν εὐθέων ἐξ ὧν ἀμφοτέρων γίνεσθαι τὴν φθοράν· ταχὺ γὰρ ἐκ τοῦ ἄνω διῖναι καὶ τὸ ψῦχος καὶ τὴν ἀλέαν ἐπὶ τὰς ρίζας διὰ τὴν εὐθυπορίαν, ἀσθενεῖς δ' οὕσας οὐχ ὑπομένειν. Ὅλως δὲ τὰ πολλὰ τῶν τοιούτων κάτωθεν ἄρχεσθαι γηράσκειν διὰ τὴν ἀσθένειαν τῶν ριζῶν. Ἔτι δὲ τὰ ὑπὲρ γῆς διὰ τὴν λεπτότητα καμπτόμενα ὑπὸ τῶν πνευμάτων κινεῖν τὰς ρίζας, τούτου δὲ συμβαίνοντος ἀπορρηγνυσθαι καὶ πηροῦσθαι καὶ ἀπὸ τούτων τῷ ὅλῳ δένδρῳ γίνεσθαι τὴν φθοράν. Ἄ μὲν οὖν λέγει ταῦτά ἐστιν. Οὐ μὴν δόξειέ γ' ἂν ὥσπερ εἴρηται καλῶς λέγειν.

[9] Οὐτε γὰρ τὸ τῶν ριζῶν ἐστιν ἀληθές ὥσπερ καὶ πρότερον ἐλέχθη τὸ τῶν μακροβίων εἶναι μακρὰς καὶ παχείας· οὐ γὰρ μακρόβιον οὐθ' ἡ συκὴ οὐθ' ἕτερα τῶν μακρορριζῶν καὶ παχυρριζῶν οὐτε τὰ εὐθέα καὶ τὰ ὀρθὰ βραχύβια οἷον ἐλάτη, φοῖνιξ, κυπάριττος· οὐδ' εὐαυξῇ δὲ ταῦτα οὐδὲ πρωϊκαρπα· καίτοι καὶ ταῦτα ἐχρῆν εὐθὺς τοιούτων γε τῶν πόρων ὄντων καὶ τῶν ριζῶν μὴ μακρῶν· ὅσα γὰρ ἀπὸ τῆς αὐτῆς αἰτίας ἅπαντα δεῖ συνακολουθεῖν τοῖς αὐτοῖς.

[10] Ἀλλὰ μή ποτε οὐ τοῦτο ἢ τὸ αἴτιον ἀλλὰ τὰ προειρημένα πρότερον, ἐν οἷς καὶ τὸ δυσφυές ὅλως καὶ τὸ μικρόκαρπον καὶ ὀλιγόκαρπον καὶ ὅλως τὸ ἰσχυρόν ἐστιν· ἢ γὰρ πυκνότης καὶ ἡ ξηρότης καὶ ἡ στερεότης καὶ ἡ λιπαρότης ἐν οἷς ὑπάρχει καὶ μακροβιότης καὶ πάντων τῶν τοιούτων αἴτια τὰ δ' ἐναντία τῶν ἐναντίων. Ὅσα δὲ πολυκαρποῦντα μὴ βραχύβια μηδὲ ταχὺ

γηράσκει καθάπερ ἄπιος, ἀμυγδαλῆ, δρυῖς, καὶ πρεσβύτερα γιγνόμενα καρπιμώτερα καθάπερ ἐλέχθη· παραιρουμένης γὰρ τῆς ἰσχύος παραιρεῖται τὸ πλῆθος τῆς τροφῆς ὥστε ῥάδιον καταπέττειν τὴν λοιπὴν· ἅμα δ' ἴσως συμβάλλεται καὶ τὸ μὴ ἐνδεδελεχῆς ἢ πᾶσιν ἢ τισιν· ἡ γὰρ ἄπιος καὶ ἔτι μᾶλλον ἢ ἀμυγδαλῇ προφαίνουσι πολὺν ἐκτρέφουσι δ' οὐ πολλάκις τοῦτον· ἔστι δ' ἐν τῇ τελειώσει ὁ πόνος καὶ ἡ ἀπέραςις.

[11] Ἡ δὲ συκάμινος ἐλαφρόν τινα καὶ ὕδατώδη καὶ μικρὸν ὡς πρὸς τὸ μέγεθος ἔχει τοῦ δένδρου τὸν καρπὸν. Ἀλλὰ γὰρ περὶ μὲν μακροβιότητος ἐν τούτοις ἔστωσαν αἱ αἰτίαι· περὶ δὲ πολυκαρπίας τῶν δένδρων εἴρηται πρότερον ὅτι τὰ θερμὰ καὶ μανὰ καὶ ὑγρά.

[12.1] Τῶν δὲ σπερμάτων ὡς ἀπλῶς εἰπεῖν τὰ ἐλάττω πολυχούστερα· καὶ γὰρ τὰ ἐλάχιστα μάλιστα καθάπερ κέγχρος, σήσαμον, ἐρύσιμον, μήκων, κύμινον. Αἴτιον δὲ δοκεῖ καθόλου μὲν καὶ κοινῶς εἰπεῖν ὅτι τὰ ἐλάττω ῥῆον ἐπιτελεῖν· ἐν δὲ τῷ ῥαδίῳ τὸ πλῆθος. Ὡς δ' ἐγγυτέρω ὅτι πάντα τὰ τοιαῦτα εὐβλαστότερα καὶ θάττον ὑπακούει τῷ ἀέρι. Σημεῖον δὲ καὶ ἡ ὀλιγοχροניות τῆς τελειώσεως· ἐπεὶ καὶ τὰ σπέρματα διὰ τοῦθ' ὡς ἀπλῶς εἰπεῖν πολυκαρπότερα τῶν δένδρων καὶ αὐτῶν τούτων τὰ χεδροπὰ τῶν σιτωδῶν· θάττον γὰρ ἢ τελειώσεις καὶ ἡ ἄδρυνσις· ἔτι δ' οἱ καυλοὶ τῶν πλείστων ἰσχυροὶ καὶ οὐ ξυλώδεις καὶ οὐ μονοφυεῖς ἀλλὰ πλείους καὶ ἀκρεμονικοὶ· πολλῶν δὲ καὶ ἰσχυρῶν ὄντων εὐλογον ἤδη καὶ τὸ τοῦ καρποῦ πλῆθος ἄλλως τε καὶ αἱ ῥίζαι μὴ ἀντισπῶσιν ὥσπερ τῶν νερθηκωδῶν καὶ κεφαλορρίζων, ἀλλ' αἰεὶ διαδιδῶσιν ὃ ἂν λαμβάνωσιν. Ὅπερ καὶ ἐπὶ τῶν χεδροπῶν ἔστι καὶ ἐπὶ τῶν ἄλλων τῶν πλείστων· μονόρριζα γὰρ καὶ οὐ παχύρριζα ἀλλ' εἰς τᾶνω φερόμενα τῇ ὀρμῇ καὶ μάλιστα ὡς εἰπεῖν τὸ κύμινον· μικρὰ γὰρ τις ἢ ῥίζα τούτου ἀμψαν.

[3] Ὅσα δὲ ἰσχυρόρριζα τούτων, ἔνια γὰρ τοιαῦτα καθάπερ ὁ κέγχρος καὶ ὁ μέλινος, ταῦτα δὲ κατὰ λόγον ἀποδίδωσι τοὺς καυλοὺς ἀπ' ἰσχυρῶν ἰσχυροὺς καὶ πολυσχιδεῖς ὥσθ' ὅταν ἀπὸ μιᾶς ἀρχῆς πολλοὶ γένωνται κατὰ λόγον ἤδη καὶ τὸν καρπὸν εἶναι πολὺν ὥσπερ καὶ ἐπὶ τῶν πυρῶν καὶ κριθῶν ὅταν ἐξ ἑνὸς πλείονες ἐκβλαστῶσι κάλαμοι, πλείους γὰρ οἱ στάχυς.

[4] Ταῦτ' οὖν δὲ τοῦτο καὶ ἐπὶ τῶν λαχανηρῶν ἔστιν ὅτι πολύσπερμα καὶ ἰσχυρόρριζα τυγχάνει· τὰ μὲν γὰρ πλείστους καυλοὺς ἀφίᾳσι τὰ δ' ἀπὸ τοῦ ἑνὸς ἀκρεμόνας πλείους· ἅπαντα γὰρ ἀποδενδρουῖται τῇ ὥφει διακαυλήσαντα, πανταχόθεν δὲ καὶ ἐκ πολλῶν πολὺς ὁ καρπός. Ὅταν οὖν καὶ τὰ τοῦ ἀέρος εὐμενῇ τυγχάνῃ, πραῦς γὰρ ἤδη καὶ ἀχείμαντος τοῖς ὀψισπόροις, καὶ ἡ φύσις

εἰς τὰ ἄνω μᾶλλον ὀρμᾷ καὶ μὴ ἀντισπᾷ τὰ τῶν ῥιζῶν ἀλλὰ συνεργῇ καὶ προσέτι μανὰ σπείρηται, κατὰ λόγον ἤδη ταῦτα πολυκαρπότερα γίνεται τῶν ἄλλων.

[5] Ὁ δὲ κύαμος καὶ εἴ τι τῶν χεδροπῶν ἄλλο μὴ πολύκαρπον δι' ἀσθένειαν ὀλιγόκαρπον· δι' ὃ δὴ πρωῒσπορεῖται προλαμβάνόντων τοὺς χειμῶνας εἰς τὴν ῥίζωσιν· ἔστι δὲ ἐπίκηρον ἐν πολλοῖς καὶ πολλάκις ὥστε ἂν καὶ προφανῇ μὴ δύνασθαι τελειοῦν. Ἡ δὲ ἀσθένεια καὶ τῇ αἰσθήσει φανερά· μανὸν γὰρ καὶ κενὸν καὶ οὐ πολύρριζον ὥστε εὐδίοδον εἶναι τῷ κακοποιοῦντι.

[6] Τοῦ μὲν οὖν πολυκαρπεῖν ἐν τούτοις αἱ αἰτίαι καὶ τοῖς ἐπετείοις καὶ τοῖς χρονιωτέροις· ἐπεὶ καὶ αἱ διακαθάρσεις τῶν δένδρων καὶ αἱ κατακοπαὶ ποιοῦσι πολυκαρπεῖν· ὅτι τὰ μὲν ἄλλα κωλύει τὰ δ' αὐτὰ λαμβάνει τὰς τροφάς· τούτων οὖν ἀφαιρεθέντων εἰς τὸν καρπὸν ἡ ὀρμή. Καὶ διὰ τοῦτο τὰς ἡρακλεωτικὰς καρύας θαμνώδεις ποιοῦσι κατακόπτοντες· ἐξαναλίσκουσι γὰρ ἀποδενδρούμενα πᾶσαν τὴν τροφήν.

[13.1] Αἱ δὲ μεταβολαὶ τῶν καρπῶν κατὰ τὰς χώρας δῆλον ὅτι κατὰ τὸν ἀέρα καὶ τὰ ἐδάφη γίνονται, διὰ τούτων γὰρ καὶ ἐκ τούτων αἱ τροφαὶ πᾶσιν. Ἰσχυρὸν δ' ἡ τροφή πρὸς ὁμοίωσιν εἴ γε καὶ ἐν τοῖς ζώοις οὕτως γίνεται ὁμοιότης. Φαίνεται δ' οὐ μόνον τὰ σπέρματα καὶ τὰ φυτὰ καὶ τὰ δένδρα μεταβάλλειν ἀλλὰ καὶ τὰ ζῶα καὶ τρόπον τινὰ μᾶλλον ταῦτα· καὶ γὰρ τὰς μορφὰς ἐξομοιοῦνται κατὰ τοὺς τόπους· ἐν δὲ τοῖς καρποῖς οὐχ ὁμοίως τοῦτο ἐπιδήλον.

[2] Οὐ μὴν ἀλλὰ καὶ ἐνταῦθα γίνεται καὶ μάλιστα ἐκδήλως κατὰ τὰ χρώματα καὶ τὰ μεγέθη καὶ τοὺς χυλοὺς· χρώματα μὲν οἷον τὰ σπέρματα· λευκὰ γὰρ ἐκ μελάνων καὶ μέλανα ἐκ λευκῶν μεταβάλλει· χυλοὺς δὲ καὶ οἱ καρποὶ, τὸ δὲ ἐκ τῶν χρωμάτων ἢ οὐκ ἐμφανὲς ἢ οὐχ ὁμοίως συμβαίνει, πλὴν ἂν ὅλον μεταστῇ τὸ δένδρον, ὥστε ἐκ μέλανος γενέσθαι λευκὸν ὅπερ ἐνίστε συμβαίνει τοῖς ἐκ σπέρματος φυομένοις.

[3] Κοινοῦ δὲ τοῦ πάθους ὄντος ὁμοίως ζῶων τε καὶ φυτῶν κοινήν τινα δεῖ καὶ τὴν αἰτίαν ζητεῖν· ἐπεὶ κακεῖνο ὅμοιον ἔν τε τοῖς σπέρμασι καὶ ἐν τοῖς ζώοις ὥστε μὴ εὐθὺς ἀλλὰ τριγωνήσαντα μεταβάλλειν· ἅπαντα γὰρ κατὰ μικρὸν ἐξαλλοιοῦνται καὶ μεθίσταται. Τὸ δ' ἐπὶ τῶν δένδρων ἀνάπαλιν εὐλόγως· ἀσθενέστατα γὰρ ἐν ἀρχῇ καὶ μάλιστα ὅταν ἐκ σπέρματος.

[4] Ἀτοπώτατον δὲ καὶ θαυμάζεται μάλιστα ἐπὶ τῶν δένδρων ἢ εἰς τὸ βέλτιον μεταβολὴ καθάπερ ἐν Αἰγύπτῳ τε καὶ ἔτι μᾶλλον ἐν Κιλικίᾳ τῶν ῥοῶν ἔτι δ' ἡ τῆς μυρρίνης περὶ Αἴγυπτον εὐωδία· τὰς γὰρ ἐπὶ τὸ χειρὸν καὶ πολλὰς

ὀρῶμεν καὶ πανταχοῦ δι' ὃ καὶ [οὐ] θαυμάζομεν. Ἔστιν οὖν δῆλον ὅτι καὶ τὸ ἐπὶ τῶν σπερμάτων συμβαῖνον ὅταν εἰς τὸ βέλτιον ἢ σχεδὸν ὁμοιον· ἐν τούτῳ γὰρ ἡ διαφορὰ τῷ τὸ μὲν ἀεὶ τοιοῦτο μένειν ὅταν φυτευθῇ, τὸ δ' ἄλλο καὶ ἄλλο μεταβάλλειν· ἐπεὶ τό γε γινόμενον ταυτό· παραιρεῖται γὰρ ἀεὶ (τι) τῆς φύσεως ἐπικρατοῦν ὡσαύτως ἀμφοῖν.

[5] Συμβαίνει γὰρ τοῦτο καὶ ἐπὶ τῶν ζώων· ἐκ μελάνων γὰρ λευκὰ γίνεται καὶ ἐκ τραχέων μαλακὰ καὶ ἄλλας τοιαύτας ἔχοντα μεταβολάς. Αἴτιον δὲ ἐνταῦθα δοκεῖ τῶν μὲν φανερῶν εἶναι τὸ ὕδωρ τῶν δὲ καὶ ὅλως αἱ τροφαὶ καὶ ὁ ἀήρ· ὥστε κάκεῖ χρή νομίζειν καὶ εἶπου ἄλλοθι τοιοῦτόν τι συμβαίνει τὰς αὐτὰς εἶναι καὶ παραπλησίας ἀνάγκας. Τὰ δὲ καθ' ἕκαστα μᾶλλον ἴσως δὲ καὶ μόνως ἂν τις ἀποδοίῃ τὴν ἐμπειρίαν προσλαβὼν χώρας καὶ τόπου διὰ τῆς ἰστορίας.

[14.1] Ὅμοιον γοῦν τούτῳ καὶ παραπλήσιον φαίνεται καὶ ὅσα διὰ τῆς θεραπείας ἀλλοιοῦνται πρῶτον μὲν καὶ καθόλου πᾶσιν εἰπεῖν ἡμερούμενα δεύτερον δὲ ἐν αὐτῷ τῷ τόπῳ. Βελτίω δὲ καὶ χαίρει γεωργούμενα ... καὶ γὰρ τοὺς πυρῆνας ὥσπερ εἶπομεν ἐλάττους ἔχει αὐτὰ δὲ βελτίονά ἐστι. Ἡ δὲ πολυϋδρία γλυκαίνει τε τὰς ῥόας καὶ μαλακωτέρας ποιεῖ· δεῖται γὰρ ἡ στρυφνότης τοιαύτης καὶ ἡ σκληρότης ἐπικουρίας· καὶ γὰρ τὸ ἐνδεὲς δεῖται βοηθείας. Ἄμεινον γὰρ δὴ τοῦτο διχῶς ἢ πρόσθεσιν τινα λαμβάνον ἢ ἀφαιρέσεως θατέρου γενομένης· καθάπερ καὶ ἐπὶ τῶν ἀμυγδαλῶν ἐλέχθη τῶν κολαζομένων καὶ περιαιρουμένων τὰς ῥίζας καὶ ἐπὶ τῶν συκῶν τῶν κατασχαζομένων· ἀφαιρεθέντος γὰρ τοῦ πλήθους τῆς τροφῆς ἰσχύει μᾶλλον τὸ σύμφυτον θερμὸν εἰς τὸ κατάλοιπον.

[2] Ἰδιωτάτη δ' ἂν δόξειεν ἡ ἀπὸ τῆς τῶν ῥιζῶν εἶναι θεραπείας τῆς τε κόπρου τῆς ὑείας ταῖς ῥόαις παραβαλλομένης καὶ εἴ τις ἄλλη τοιαύτη τινὶ δίδοται τροφή δι' ἧς γλυκαίνει τὸν χυλόν. Λέγεται δὲ καὶ ὥς ἡ πολυϋδρία καὶ ἡ ψυχροϋδρία ποιεῖ τινα μεταβολὴν καὶ ἐμφανέστατα δὴ καὶ μάλιστα ἡ τῶν ἐδαφῶν ἐνίων καὶ τοῦ ἀέρος φύσις ὥσπερ καὶ ἐν Αἰγύπτῳ καὶ ἐν Κιλικίᾳ· ἐν τούτοις γὰρ καὶ ζητεῖν ὅλως δεῖ τὰς ἀλλοιώσεις καὶ μεταβολὰς ἐδάφει καὶ ὕδατι καὶ ἀέρι καὶ ἐργασίᾳ. Καὶ γὰρ ἀπλῶς ἡ γεωργία μεθίστησιν ἐξημεροῦσα τὰ δένδρα καὶ τοὺς καρπούς.

[3] Ὑπὲρ μὲν οὖν τῶν λοιπῶν ἕτεραί τινες αἰτίαι, ὑπὲρ δὲ τῆς ἀπὸ τῶν ῥιζῶν μεταβολῆς ὑπὲρ ἧς τὰ νῦν ὁ λόγος ἐκεῖνο δεῖ λαβεῖν ὅτι καθάπερ ἀρχαὶ τινες αἱ ῥίζαι τῶν δένδρων· ἀκολουθεῖν δὲ φιλεῖ ταῖς ἀρχαῖς τὰ ἄλλα. Δι' ὃ καὶ ἐπὶ τῶν σικύων ἐλέχθη πρότερον ὅτι βρεχομένων ἐν γάλακτι τῶν σπερμάτων ἢ ἐν

μελικράτῳ γλυκύτεροι γίνονται. Καὶ ἐπ' ἄλλων. Αὗται δὲ καὶ τὴν τροφήν πεπεμμένην μᾶλλον λαμβάνουσαι καὶ αὐταὶ μεταβάλλουσαι συµμεταβάλλειν ποιοῦσι καὶ τὸ δένδρον· ἀπὸ γὰρ τούτων ἡ διάδοσις. Ἐπεὶ καὶ αἱ πολυῦδρῖαι καὶ τὰ ἐδάφη καὶ αἱ κατεργασίαι περὶ ταύτας πρῶτον καὶ ἀπὸ τούτων ἀρχόμεναι τὰ ἄλλα συναλλοιοῦσι.

[4] Πρὸς ἕτερα δ' ἴσως καὶ ἕτεραι βοήθειαι συνεργοῦσιν οἷον αἱ σχάσεις συκῶν καὶ κλάσεις τῶν ἀμπέλων καὶ αἱ κολάσεις τῶν ἀμυγδαλῶν ἢ πληγαῖς ἢ διειρόντων τοὺς παττάλους· ἀπορρεούσης γὰρ τῆς ὑγρότητος ἡ καταλειπομένη ῥῆον ἐκπέττεται γλυκύτης. Τὰ δ' (ἐν)οφθαλμιζόμενα ἢ ἐγκεντριζόμενα οὐ πέφυκε μεταβάλλειν ὅτι καθάπερ ἀρχὴ τις ἑτέρα τούτων ἐστὶν ἧς οὐκέτι δύναται κατακρατεῖν· ὥσπερ γὰρ γῆ χρηταὶ τῷ ὑποκειμένῳ τὸ ἐμφυτευόμενον ἢ (ἐν)οφθαλμιζόμενον ὥσπερ ἐλέχθη.

[5] Καὶ εἰσιν αὗται δύο μεταβολαὶ καὶ ἀπὸ δυοῖν, ἥ τε ἀπὸ τῶν ῥιζῶν καὶ ἡ ἀπὸ τῶν (ἐν)οφθαλμιζομένων ἢ ἐμφυτευομένων, ἡ μὲν αὐτῶν τῶν ὑποκειμένων ἀλλοιουμένων, ἡ δὲ ἑτέρων τινῶν ἐμβαλλομένων δι' ὃ καὶ ἤττον ἐπὶ ταύτης τὸ θαυμαστόν. Διὰ τί δ' ἡ ῥόα μάλιστα μὲν μεταβάλλει τὴν μανότητα καὶ τὴν ἀσθένειαν αἰτιάσαιτ' ἂν τις· εὐηκοώτατα γὰρ τὰ τοιαῦτα πρὸς μεταβολήν. Ἐπισκεπτέον δὲ καὶ εἰ τις ἄλλη τῆς φύσεως ιδιότης.

[15.1] (Τῆς) δ' εἰς τὸ χειρὸν μεταβολῆς δῆλον ὡς ἐναντία (αἱ αἰτίαι) καὶ ἐμφανεστάτη γε (καὶ) κοινοτάτη πᾶσιν ἀγεωργησία· πάντα γὰρ ὡς εἰπεῖν ἀπαγριοῦται. Ἐνίστε δὲ καὶ οἶονεὶ πηρώσει τινὶ μεταβάλλουσιν εἰς τὸ χειρὸν κολουόμενα κατὰ τὴν πρώτην γένεσιν τὰ φυτὰ καθάπερ ἡ ἀμυγδαλῇ· πικρὰ γὰρ ἐκ γλυκείας γίνεται καὶ ἐκ μαλακῆς σκληρά· τὰ δ' ἄλλα οὐκ ἔστιν ἐπίδηλα μεταβάλλοντα. Καίτοι τά γε τῆς ἀμπέλου φυτὰ καὶ ἀπόλλυται πονοῦντα· τὰ δὲ μᾶλλον καὶ μεταβάλλειν εἰκὸς μᾶλλον ἦν. Τῇ γὰρ ἀμυγδαλῇ καὶ τὸ ὅλον φαίνεται παράλογον· ἰσχυρότερον γὰρ τὸ δένδρον.

[2] Ἐνια δὲ καὶ βελτίῳ κολουόμενά φασι γίνεσθαι καθάπερ οἱ Χῖοι τὴν ἅπιον τὴν φωκίδα. Τὸ μὲν οὖν ἰσχυρὸν τῆς ἀμυγδαλῆς οὐκ ἐν τῷ αὐτῷ λαμβάνεται δένδρῳ· κολουσθεῖσα μὲν γὰρ ἰσχυρὰ φυομένη δὲ ἀσθενὴς ἄλλως τε καὶ ἀπὸ σπέρματος. Ἐπεὶ καὶ μὴ κολουσθεῖσαι πικραὶ γίνονται καὶ σκληραὶ καθάπερ ἐν τοῖς πρότερον ἐλέχθη. Πᾶν γὰρ ὅλως ἀπὸ σπέρματος ἐξαλλοιοῦται πρὸς τὸ χειρὸν· κινηθείσης δὲ τῆς φυσικῆς ὁρμῆς εἰκὸς ἔτι μᾶλλον, οἷον γὰρ ἄλλη καὶ ἀσθενεστέρα γέγονεν. Ἐπεὶ καὶ τὰ ἐνφόμενα κωλύεται μὴ ἐν καιρῷ κινούμενα καὶ ἡ γῆ δυσδιάτηκτος ἢ βρεχομένη· ὃ δὲ ἐν· ἀρχῇ μέγα καὶ διατενὲς πρὸς τὴν τελείωσιν.

[3] Ἐπὶ μόνῃς δὲ ταύτης μάλιστ' ἐνδηλον εἶναι τὴν μεταβολὴν οὐκ ἄτοπον καὶ διὰ τὰς προειρημένας αἰτίας καὶ διότι τῆς μὲν ἀμπέλου καὶ τῶν ἄλλων οὐθενὸς ὁ καρπὸς τελεούμενος πικρὸς ἢ ὀξύς ἀλλ' ἦτοι γλυκὺς ἢ οὐκ ἐπέφθη ταύτης δὲ οὐχ ὑπάρχει τοιοῦτος εὐθὺς ἐν τοῖς τελείοις καὶ εὐκαρποῦσι. Τάχα δὲ καὶ τῶν ἄλλων ἐστὶ τις καὶ εἰς τὸ στρυφνότερον ἢ ὑδαρέστερον, ἢ μὴ ὁμοίως γλυκὺ λανθάνει δὲ τὴν ἡμετέραν αἴσθησιν. Καὶ γὰρ αὐτῶν τῶν ὁμογενῶν αἱ μὲν μᾶλλον αἱ δ' ἦττον τοιαῦται. Συμβαίνει δὲ ταῖς κολουσθείσαις ἂν πρεσβύτεραι γενόμεναι πάλιν ἐπικόπτονται καὶ διακαθαίρωνται γλυκυτέραις γίνεσθαι καὶ τέλος ἀποκαθίστασθαι πρὸς τὴν φύσιν.

[4] Αἴτιον δὲ ἔτι πρὸς τῷ εἰρημένῳ δι' ὅτι ἡ μὲν κολουσις κωλύσασα τὴν εἰς τὸν ὄγκον βλάστην κατέμιξε καὶ χεῖρω τὴν ὑγρότητα τὴν εἰς τὸν καρπὸν ἐποίησε· πλείονος δ' οὔσης ἄπεπτος ὥστε πικρὸς. Καὶ κατακοπτομένη δὲ λαμβάνει τινὰ ἀποπνοὴν καὶ ἀφαίρεσιν ὥστε καὶ ὅταν οἱ σφῆνες διακρουσθῶσιν· ἐλάττονος δὲ γινομένης καὶ αὐτὸ μᾶλλον ἰσχύον διὰ τὴν εὐσθένειαν ἐκπέττει τε μᾶλλον καὶ ἀποκαθίσταται.

[5] Ταύτης μὲν οὖν ὥστερ ἀνασώζεται πάλιν ἡ φύσις. Ἐνια δὲ ἐὰν μὴ κολουσθῇ τὸν καρπὸν οὐ πέττει καθάπερ ἡ ἄμπελος ἢ κανθάρεως καλουμένη δι' ὃ καὶ κολοῦουσιν ἄκρον τὸν βότρυν, εἰ δὲ μὴ σῆπει καὶ διαφθείρει. Δῆλον οὖν ὡς ἀπλῶς εἰπεῖν ὅτι ἀφαιρέσεως δεῖται τῆς ὑγρότητος. Ἡ δ' (ἄπιος ἢ) φωκὶς κολουομένη βελτίων πρὸς δένδρωσιν οὐ πρὸς εὐκαρπίαν· ἐκτρέχει γὰρ ἄγαν μὴ κολουσθεῖσα καὶ γίνεται μονόκωλος καὶ ἀσθενής, εἰ δὲ μὴ παραβλαστάνουσα δενδροῦται.

[6] Τάχα δ' ἂν τι συμβάλλοιτο τοῦτο καὶ πρὸς εὐκαρπίαν· ἰσχυροτέρας γὰρ γινομένης ἢ πένης καλλίων. Τῶν δὲ λαχανωδῶν ἢ ποιωδῶν ὅσα κολουόμενα ἢ κειρόμενα βελτίω, καθάπερ τὰ τε πράσα καὶ ἡ ράφανος ἦν παλιμβλαστῆς ἢ καὶ ἡ μηδικὴ καὶ ἡ θρίδαξ καὶ τὸ ὠκιμον, ἅπαντα ταῦτα τῇ ἀπαλότητι καὶ εὐτροφίᾳ βελτίω καὶ εὐχυλότερα γίνεται. Παραιρεῖται γὰρ ἡ δριμύτης καὶ ἡ ξηρότης καὶ εἰ ἐν τινι τὸ ὁπῶδες τούτων· ἀπαλὰ δὲ καὶ εὐτραφεῖ γίνεται διὰ τὸ τὰς ρίζας ἰσχυροτέρας εἶναι καὶ ὅλως αὐξανομένης ἔτι μᾶλλον κολουομένων τῆς ἰσχύος. Αἱ δὲ καὶ ἐπισπῶνται πλείω καὶ καταπέττουσι μᾶλλον. Ἔτι δὲ ἀφαιρουμένων τῶν ξυλωδῶν καὶ σκληρῶν ἢ ἐπίδοσις πλείων μηθενὸς ἐμποδίζοντος. Ἡ δὲ πρώτη βλάστησις ἐξ ἀσθενοῦς ὠρμημένη μᾶλλον χεῖρων. Αὐτὰι μὲν οὖν ἐν τοῖς χυλοῖς αἱ μεταβολαί.

[16.1] Γίνονται δὲ καὶ κατὰ τὰς ὁσμὰς μάλιστα μὲν αὐτομάτως διὰ τὸν ἀέρα

καὶ τὴν χώραν. Εὐοσμότερα γὰρ ὥς ἐπὶ πᾶσιν αἱ ξηραὶ ποιοῦσι καὶ ὁ ἄηρ ὁ τοιοῦτος δι' ὃ καὶ τὰ ἄγρια εὐοσμότερα. Τάχα δὲ οὐ πάντως οὐδ' ὁδωδέστερα, δριμύτερα γάρ· ἀρίστη δὲ ἡ μέση καὶ ὁ μέσος. Ἐπεὶ καὶ τὰ ἐν τῇ γῇ ὑδαρῇ καὶ ἄοσμα. Καὶ περὶ μὲν ὁσμῶν καὶ χυλῶν αὐτὰ καθ' αὐτὰ δεῖ θεωρεῖν ἐπὶ πλεόν ἐν τοῖς ὕστερον. Αἱ δὲ μεταβολαὶ διότι καὶ ἐν τούτοις γίνονται καὶ φυσικῶς καὶ ἐκ θεραπείας φανερόν ἐκ τῶν εἰρημένων.

[2] Ἦναι δὲ δοκοῦσιν ὅλων τῶν δένδρων καὶ φυτῶν αὐτόματαί τινες εἶναι μεταβολαὶ καθάπερ τὴν λεύκην ἐξαιγειροῦσθαί φασι καὶ φύλλοις καὶ τῇ ὅλῃ προσόψει καὶ τὸ σισύμβριον εἰς μίνθαν μεταβάλλειν μὴ κατεχόμενον ταῖς ἐργασίαις καὶ μεταφυτευόμενον πολλάκις, ἔτι δὲ καὶ τὸν πυρὸν ἐξαιροῦσθαί καὶ τὸ λίνον.

[3] Αὕτη μὲν οὖν εἴπερ ἀληθὴς ὥσπερ φθορά τις ἔοικεν εἶναι διὰ πλῆθος ὕγρου· γίνεται γὰρ δι' ἐπομβρίαν. Ἀλλοιωθείσης δὲ τῆς ἀρχῆς ἄλλοιον τὸ ἀναβλαστάνον· ἡ δὲ αἶρα φίλυδρον. Ἡ τε τῆς λεύκης εἰ ἄρα ἐστὶ μεταβολὴ γινομένη τις ἂν εἴη παχυνόμενου τοῦ δένδρου μᾶλλον ὃ συμβαίνει διὰ τὴν ἡλικίαν· εἰς βάθος γὰρ ἡ αὐξησις ἀπογηρασκόντων, ἐν ᾧ περ οἱ τε φλοιοὶ παχύτεροι καὶ οἱ ἀκρεμόνες μείζους καὶ πλείους.

[4] Ὁ δὲ τῶν φύλλων μετασχηματισμὸς καὶ ἐτέρων κοινός· ἐπεὶ καὶ τὰ τοῦ κρότωνος ἔνια περιφερῇ φυόμενα τὴν ἀρχὴν ὕστερον ἀπογωνιοῦται καθάπερ ἀνελὴ διαρθρούμενα· τοῦτο δ' ὅτι ῥᾶν τὸ ἀπλοῦν ἢ τὸ πολυειδές, ἀσθενὴς δ' ἡ ἀρχή. Τὸ δὲ σισύμβριον εἰς μίνθαν κατὰ τὴν ὁσμὴν εἴπερ ἄρα μεταβάλλει μόνον ἀπόλλυν τὴν οἰκείαν ἐξαμαυρούμενον διὰ τὴν ἀργίαν, ἐκείνην δ' οὐ λαμβάνον ἄλλ' ὥσπερ ὅμοιον ταῖς καλαμίνθαις γινόμενον. Ἡ γὰρ μεταβολὴ πᾶσιν εἰς ὅμοιον τι καὶ οὐ πόρρω τελῶς φθειρομένων.

[5] Ἡ δὲ θεραπεία καὶ ἡ μεταφυτεία κατέχει καὶ σώζει τὴν φύσιν· σημεῖον δὲ ὅτι καὶ τὸ ἄγριον τοιοῦτον τῇ ὁσμῇ· καὶ γὰρ δὴ ἀκείνῳ τὸ τῆς φύσεως ἐναντίον· ἡ μὲν γὰρ μίνθα βαθύρριζον τὸ δὲ σισύμβριον ἐπιπολῆς καὶ οὐχ ὁμοίως πολύρριζον. Ὡστε μᾶλλον ἔοικεν ἐπὶ γε τῶν τοιούτων κατὰ φαντασίαν ἢ μεταβολὴ γίνεσθαι καὶ ὥσπερ εἰ τοῦ ἡμέρου εἰς τὸ ἄγριον. Οὐδ' ἐτέρως δ' ἄτοπον ἐπεὶ γε καὶ οἱ τόποι μεταβάλλουσιν.

[6] Εἰ δὲ καὶ ἐπὶ τῶν ζώων τοῦτο συμβαίνει καθάπερ φασὶν ἐπὶ τῶν ὀρνίθων καὶ χρώμασι καὶ σχήμασι καὶ δυνάμεσι καὶ τοῦτο καθ' ἕκαστον ἐνιαυτὸν οὐκ ἐν πλήθει χρόνου πλείονι καὶ θαυμάσειεν ἂν τις μᾶλλον, εἰ μὴ τι συμβαίνει καὶ ἐν ταῦθα τοιοῦτον· ἀτακτοτέραν γὰρ καὶ μᾶλλον ξυγκεχυμένην εἰκὸς ταύτην εἶναι τὴν φύσιν, τάχα δ' ἰσχυροτέραν δι' ὃ καὶ μεταβάλλειν οὔτε

χρώμασιν οὔτε ἐν τοῖς ἄλλοις φθειρομένην· καὶ τοῦτο ἐν ὀλίγοις ὥστε εἰς ἄλλο γε μεταλλάττεσθαι φυτόν.

[7] Οὐδὲ γὰρ κατὰ τὴν γένεσιν οὐδὲν μεταβάλλει τὰς μορφὰς ὥσπερ ἔνια τῶν ζώων ἀλλ' ἀπλῆ τις ἡ φύσις πάντων. Ἀλλ' αἱ μεταβολαὶ γίνονται καθάπερ πολλακίς λέγεται τοῖς τε χυλοῖς μάλιστα καὶ ταῖς ὁσμαῖς καὶ τοῖς μεγέθεσιν αὐτῶν τε τῶν καρπῶν καὶ τῶν φύλλων, καὶ γὰρ τὰ στενόφυλλα πλατυφυλλότερα γίνεται, καὶ ὅλως τῶν μερῶν τούτων. Διὰ τοῦτο καὶ ζητεῖ τόπον ἕκαστον οἰκεῖον, οἰκεῖος δ' ἐν ᾧ περ εὐθενεῖ.

[8] Δι' ὅπερ καὶ οὐ πᾶσιν ὁ ἄριστος ἀλλ' ἔνια λεπτὴν καὶ λυπρὰν χώραν φιλεῖ τὰ δὲ ὑφαμμον ἔνια δὲ καὶ ἀλμώδη τινὰ καθάπερ ἡ ράφανος. Διττῶς δὲ καὶ τὸ τῆς χώρας πρόσφορον· ἡ γὰρ τὸ οἰκεῖον τῆς φύσεως ἡ τὸ πρὸς ἰσχὺν καὶ δύναμιν ἀρμόττον, οἷον ταῖς ἀμυγδαλαῖς ἡ λεπτὴ· βαθείας γὰρ οὔσης καὶ πιείρας ἐξυβρίσασαι διὰ τὴν εὐτροφίαν ἀκαρποῦσι. Καὶ καθόλου περὶ τῶν δένδρων εἴρηται πρότερον· ἀλλὰ δὴ τὰ μὲν περὶ τὰς ἀλλοιώσεις καὶ μεταβολὰς ἀχρι τούτων διωρίσθω.

[17.1] Θαυμασιώτατον δ' ἂν δόξειε καὶ ὅλως ἄτοπὸν τι καὶ παράδοξον εἶναι τὸ ἔνια μὴ δύνασθαι βλαστάνειν ἐν τῇ γῇ καὶ σπέρματα καὶ φυτὰ καθάπερ ἡ ἰξία καὶ ἡ στελὶς καὶ τὸ ὑφέαρ, ὧν τὴν μὲν καλοῦσιν Εὐβοεῖς τὸ δὲ ὑφέαρ Ἀρκάδες, ἡ δὲ ἰξία κοινή· φασὶν (οὖν) οἱ μὲν εἶναι πάντα μίαν τινὰ φύσιν τῷ δὲ ἐν ἐτέροις φύεσθαι διαφέρειν [καὶ] δοκεῖν. Τὸ γὰρ ὑφέαρ ἐν ταῖς ἐλάταις καὶ πεύκαις γίνεται καὶ ἡ στελὶς ἡ δ' ἰξία καὶ ἐν δρυὶ καὶ ἐν τερμίνθῳ καὶ ἐν ἐτέροις πλείοσιν.

[2] Οἱ δὲ διαφέρειν καὶ σημεῖον λέγουσιν οὐ μικρὸν, εἰ γὰρ ἀληθές, ὥς οὐ μόνον ἐν τοῖς ὁμογενέσιν ἕκαστον ἐμφύεται τούτων οἷον ἐλάταις καὶ πεύκαις, ἀλλὰ καὶ ἐν τῷ αὐτῷ πλείω καθ' ἑκάτερον τῶν μερῶν ἔνθεν μὲν στελὶς ἡ ἰξία ἔνθεν δὲ ὑφέαρ· ἔτι δὲ οὐ μόνον τὰς μορφὰς (ἀλλ') οὐδὲ (τούς) καρποὺς ὁμοίους ἔχειν φασὶ καὶ τοῦτό γε πανταχόθεν διατηρεῖσθαι καὶ ἐν ταῖς πλείστον διαφορούσαις χώραις. Ἐπεὶ τό γε τὴν μὲν ἀειφύλλον εἶναι τῶν ἰξιῶν (τὴν δὲ φυλλοβόλον) οὐθὲν ἄτοπον, κἂν ἡ μὲν (ἐν) ἀειφύλλοις ἡ δὲ ἐν φυλλοβόλοις ἐμβιόῃ· συμβαίνει γὰρ ἔνθα μὲν ἔχειν ἔνθα δὲ μὴ ἔχειν διαρκῇ τὴν τροφήν· αἰτία δὲ αὕτη τῆς ἀειφυλλίας καὶ μὴ καθάπερ εἶπομεν.

[3] Ἀλλὰ τοῦτο μὲν ὁποτέρως ποτ' ἔχει πρὸς τὸ νῦν ἀπορούμενον οὐθὲν διαφέρει. Τὸ δὲ μὴ φύεσθαι χαμαὶ μηδαμῶς ἄτοπον ἄλλως τε καὶ οὕτω πολὺν καὶ ἰσχυρὸν ἔχουσιν καρπὸν. Εἰ δὲ καὶ σπέρματα [τὰ] τοιαῦτά ἐστιν οἷον τὸ περὶ Βαβυλῶνα τῇ ἀκάνθῃ περὶ τὸ ἄστρον ἐπισπειρόμενόν φασιν αὐθημερόν

ἀναβλαστάνειν καὶ ταχὺ περιλαμβάνειν καὶ τὴν ἄκανθαν, ἔτι δὲ τὸ συριακὸν βοτάνιον ὁ καλούμενος καδύτας καὶ δένδροις καὶ ἀκάνθαις ἐμφύεται καὶ ἄλλοις τισὶ, τῇ μὲν ἔλαττον (ἄν) εἴη τῇ δὲ πλεῖον τὸ θαυμαστόν· ἀμφοτέρα γὰρ ποιεῖ τὸ πλῆθος ἐν τοῖς παραδόξοις ὅτε μὲν ὡς πεφυκὸς οὕτω μὴ θαυμάζειν ὅτε δὲ μᾶλλον θαυμάζειν διὰ τὸ πλῆθος.

[4] Ἐπεὶ τό γε ἐμφύεσθαι καὶ ἐν δένδροις καὶ ἐν φυτοῖς ἐτέροις τὸ καὶ ἐν τῇ γῇ φυόμενον οὐκ ἄτοπον ἄλλως (τε) καὶ γινόμενον ὥσπερ ὁ κιττὸς ἐν πολλοῖς. Ἔτι γὰρ τοῦτο παραδοξότερον ὅτι καὶ ἐν ἐλάφου κέρασιν ὥπται καὶ ἡ τέρμινθος δὲ ἐν ἐλάᾳ καὶ τὸ πολυπόδιον καλούμενον ἐπὶ τισὶ δένδροις καὶ ὅσα δὴ σπανιώτερα καὶ τερατωδέστερα φαίνεται, καθάπερ ἡ δάφνη ποτὲ ἐν πλατάνῳ καὶ ἐν δρυὶ καὶ τὰ ἄλλα ὅσα ὡς τέρατα προφαίνουσιν. Ὅταν γὰρ εἰς γεῶδες γεγενημένον διὰ σῆψιν ἐμπέσῃ τὸ σπέρμα διεβλάστησεν εἴτα ζῇ τὴν τροφὴν τὴν ἐκ τοῦ δένδρου λαμβάνον, ὁ καὶ ἐπὶ τοῦ κιττοῦ τοῦ περὶ τὰ κέρατα βλαστόντος εἶπερ ἦν οὐκ ἄλογον.

[5] Ἀλλὰ τὸ ἐν ἐτέρῳ μόνον φύεσθαι χαμαὶ δὲ μὴ τοῦτ' ἄτοπον· προσφιλῇ γὰρ δὴ ἀλλήλοισι καθάπερ καὶ τὰ ζῶα καὶ τὰ φυτὰ τάχ' ἂν εἴη· τὸ δ' ὅλως ἐπὶ τῆς γῆς μὴ φύεσθαι θαυμαστόν ἄλλως τε καὶ καρπὸν ἔχον καὶ σπέρμα καὶ ἀπὸ τούτου βλαστάνον. Εἰ γὰρ ἦν ἐκ διαφθορᾶς τινος τῶν ἐν τοῖς δένδροις ἡ γένεσις, ὥσπερ ἐν τοῖς ζώοις ἐγγίνεται τοιαῦτα ζῶα, λόγον τινὰ εἶχεν· ἀλλ' οὐκ ἔστιν οὐδὲ γίνεται πλὴν ἀπὸ σπέρματος ὅταν οἱ ὀρνίθες ἐσθίωντες τὸν καρπὸν προϊῶνται τὴν περίττωσιν ἐπὶ τῶν δένδρων· τότε γὰρ αὐτὸς ὁ καρπὸς σωζόμενος καὶ ἐπιμείνας διεβλάστησε. Τὸ μὲν οὖν θαυμαστόν πολὺ καὶ ἐκ πολλῶν.

[6] Ἔοικεν οὖν ὁμοίον τι συμβαίνειν ταῖς ἐμφυτεῖαις καὶ τοῖς ἐνοφθαλμισμοῖς· ἐτοιμοτέραν γὰρ λαμβάνει τροφὴν καὶ ὥσπερ κατειργασμένην καὶ πεπεμμένην σχεδὸν ὁ καὶ ἡ ἰξία ζητεῖν φαίνεται. Τὸ δὲ τοιαύτης δεόμενον ἀσθενὲς ἂν εἴη τῇ φύσει, τοῦτο δὲ πάλιν οὐκ ἔοικεν ἀλλ' ἰσχυρὸν εἶναι καὶ τρόφιμον καὶ ἡ ἰξία καὶ ἡ στελὶς καὶ τὸ ὑφέαρ· τούτοις γὰρ δὴ καὶ τοὺς βοῦς καὶ τὰ ὑποζύγια χιλεύουσι καὶ ἀνατρέφουσι μετὰ τοὺς θερισμούς. Ἔτι δὲ καὶ αὐτὸς ὁ καρπὸς τῆς ἰξίας μηνύει τὴν ἰσχύν.

[7] Ἀλλὰ μὴν εἴ γε ἰσχυρὰ καὶ μὴ ἀσθενῇ διὰ τί ποτ' οὐ βλαστάνει καθ' αὐτὰ καὶ φύεται· διαβιάσασθαι γὰρ τὴν γῆν τῶν ἰσχυόντων ἐστὶν ὅπερ ποιεῖ καὶ ὁ θέρμος. Εἰ δ' αὖ ψυχρὸν ἔχει τὸ σπέρμα καὶ δύσπεπτον ἀλλὰ χρονιωτέραν ἐχρῆν εἶναι τὴν ἔκφυσιν ὥσπερ καὶ ἐτέρων. Ἐπεὶ καὶ τῶν τευτλίων ἐνία φασὶ τῷ ὕστερον ἔτει διαφύεσθαι καὶ διαβλαστάνειν· οὐδὲ γὰρ

οὐδὲ ταύτη κίνδυνος ὥστε σαπῆναι· διαμένον γὰρ καὶ τοῦτο φαίνεται καὶ ἕτερα πολλῶ τούτων ἀσθενέστερα. Ταῦτα μὲν οὖν οὐ λύει τὴν ἀπορίαν ἀλλ' ἐπιξυνδεῖ μᾶλλον.

[8] Ἡ δ' ἀρχὴ ληπτέα φυσικῶς ἀκολουθοῦσι κατὰ τὸ γινόμενον ὅτι πέφυκεν ἐν ἐτέρῳ μόνον ταῦτα γίνεσθαι καθάπερ καὶ ζῶα ἐν ζώοις οἷον τὰ τε ἐν ταῖς πίνναις ἐστὶ καὶ ὅσα ἄλλα ζωοτροφεῖ. Πλὴν τῶν μὲν οὐκ ἔχομεν τὴν γένεσιν τῶν δ' ἔχομεν λέγειν. Τὸ δὲ ἀπὸ τῆς τῶν ὀρνίθων προσφορᾶς εἶναι τὴν ἀρχὴν ὥσπερ συμβεβηκός ἐστι πρὸς τὴν γένεσιν ὅπερ καὶ ἐπ' ἄλλων γίνεται. Κατορύττει γὰρ ἡ κίττα θησαυριζομένη τὰς βαλάνους καὶ ἄλλα τῶν ὀρνέων· περιαιρεθέντος δὲ τοῦ ἰξοῦ καὶ κατεργασθέντος ἐν ταῖς κοιλίαις ὅπερ ἐστὶ ψυχρότατον σὺν τῷ περιττώματι καταπίπτον τὸ σπέρμα καθαρὸν καὶ τοῦ δένδρου λαμβάνοντός τινα μεταβολὴν ὑπὸ τῆς κόπρου διαβλαστάνει καὶ φύεται.

[9] Τὴν δ' ἰσχὺν εὐλόγως ἔχει καὶ διὰ τὴν εὐτροφίαν καὶ μάλιστα ἴσως διὰ τὴν αὐτοῦ φύσιν. Ἰσχυρότερα δὲ εἰκὸς τὰ ἐν ταῖς ἐλάταις καὶ πεύκαις εἶναι· πλείων γὰρ ἡ τροφή καὶ λιπαρωτέρα. Πολλὰ δ' ἡ φύσις φαίνεται καὶ ἐν τοῖς ζώοις τοιαῦτα ποιεῖν ὥσθ' ἕτερον ἐτέρῳ χρήσιμον εἶναι πρὸς σωτηρίαν καὶ γένεσιν ἅπερ ἐν ταῖς ἱστορίαις ταῖς περὶ τούτων εἴρηται· δι' ὃ καὶ ἐνταῦθα ἴσως οὐ θαυμαστόν τὸ τῶν ὀρνίθων εἶτε ἐπίτηδες εἶτε κατὰ συμβεβηκός γεγονεν οὐδὲ λεκτέον ὅτι οὐκ ἂν ἦν ἡ γένεσις εἰ μὴ διὰ τούτους. Οὔτε γὰρ ἴσως ταῖς πίνναις βίος εἰ μὴ διὰ τὸν κάρκινον, οὐδ' ἡ τῶν μελιττῶν φύσις εἰ μὴ διὰ τὸν γόνον ὥς φασὶ τινες, οὐδ' ἡ τοῦ κόκκυγος εἰ μὴ ἦν ἡ ὑπολαῖς ἢ εἰς τὴν νεοττίαν τὰ ὡὰ τίθησιν. Ἀλλ' ὥσπερ καὶ φθοραὶ καὶ σωτηρίαι τινὲς γίνονται δι' ἀλλήλων καὶ εἰς τοὺς βίους καὶ εἰς τὰς γενέσεις οὕτω καὶ πρὸς τὰ φυτὰ διήκειν οὐθὲν κωλύει παρὰ τῶν ζώων. Ὡστε ταύτην ἢ τοιαύτην αἰτίαν ὑποληπτέον εἶναι τῶν ἀπορηθέντων.

[10] Ἐν δὲ τοῖς ἐπισπειρομένοις ἀφήρηται καὶ τὸ συμβεβηκός, προαιρέσει γὰρ δρῶσιν, ἀλλὰ τὸν καιρὸν δῆλον ὅτι λαμβάνουσι τῆς ἐπισπορᾶς ὅταν ὀργᾷ τὸ ὑποκείμενον ὥσπερ ἡ ἄκανθα φαίνεται περὶ τὸ ἄστρον· ἐνικμον γὰρ δεῖ καὶ εὐαφὲς εἶναι πρὸς τὴν διαβλάστησιν· τὸ δὲ ταχὺ τῆς ἐκφύσεως οὐ μόνον διὰ τοῦτο καὶ τὴν ὥραν ἀλλὰ δῆλον ὅτι καὶ διὰ τὴν ἰδίαν γίνεται φύσιν. Καὶ περὶ μὲν τούτων ἄλλως.

[18.1] Ὅτι δὲ καὶ ἐν τοῖς φυτοῖς ἔνια συνεργεῖ πρὸς τὴν ἀλλήλων σωτηρίαν καὶ γένεσιν καὶ ἐκ τῶνδε φανερόν· ἐν μὲν γὰρ τοῖς ἀγρίοις τὰ φυλλοβόλα τοῖς ἀειφύλλοις ὅτι σηπομένων ξυμβαίνει καθάπερ κοπρίζεσθαι τὴν γῆν ὃ καὶ πρὸς

εὐτροφίαν καὶ πρὸς τὴν βλάστησιν τῶν σπερμάτων χρήσιμον. Ἐν δὲ τοῖς ἡμέροις ὅσα τοῖς φυτοῖς ἐπισπεύρουσι τῶν ἀμπέλων ἀφαιρεῖν βουλόμενοι τὸ πλῆθος τῆς ὑγρότητος καὶ τοῖς λαχάνοις ἢ τούτου χάριν ἢ τῶν γινομένων θηρίων οἶον ταῖς ῥαφανίσιν τοὺς ὀρόβους πρὸς τὰς ψύλλας καὶ εἴ τι τοιοῦτον ἕτερον ἐτέροις.

[2] Οἶεσθαι γὰρ χρή τοιαῦτα καὶ ἐν τοῖς αὐτομάτοις τῆς φύσεως ὑπάρχειν ἄλλως τε καὶ εἰ ἡ τέχνη μιμεῖται τὴν φύσιν. Ἔτι δὲ ὅσα πρόσδεन्द्रα καὶ περιαλλόκαυλα τυγχάνει· ταῦτα γὰρ τὸ πρὸς ἐτέρῳ διώκει καθάπερ ὁ τε κίττος καὶ ἡ σμῖλαξ καὶ ἡ σικύα καὶ ἄλλ' ἅττα καὶ τῶν ἐλαττόνων ἔρπυλλος, ἰασιώνη· πάντα γὰρ ταῦτα ζῆ πρὸς ἐτέρῳ, μὴ ἔχοντα δὲ χαμαίκαυλα γίνεται πλὴν ὅσα καὶ δενδροῦσθαι πέφυκε καθάπερ ὁ κιττός. Ἔστι δὴ καὶ (ἡ) ἄμπελος τοιοῦτον· οὐ γὰρ ἂν δύναίτο φέρειν τὰ κλήματα καὶ τὴν βλάστησιν ἢ οὐχ ὁμοίως καλὰ μὴ ἔχουσα τὸ ὑπερεῖσον, ἀλλὰ καὶ τὴν ἔλικα δοκεῖ τούτου χάριν ἔχειν ὅπως εὐθὺς ἀντίληψις γένηται καὶ οἶον δεσμός ὥσπερ ὁ κιττός τὰ ῥίζια τὰ ἐκ τῶν βλαστῶν.

[3] Ὅσα δὲ κοῦφα καὶ λεπτὰ ῥαδίως ἀναβαίνει καὶ ἐπιμένει καθάπερ ἡ ἰασιώνη καὶ ὁ θέρμος καὶ ὁ δόλιχος. Πάντα δὲ ταῦτα βλάπτει τὰ δένδρα καταπνίγοντά τε καὶ ἐπισκιάζοντα καὶ τὴν τροφὴν ἀφαιρούμενα τὰ μὲν τῷ κωλύειν ὁ δὲ κιττός καὶ τῷ ἐμφυόμενος ἐξαιρεῖσθαι δι' ὃ χαλεπώτατος τοῖς δένδροις οὗτος· πρὸς γὰρ τοῖς ἄλλοις ἀείφυλλος ὢν καὶ ἰσχυρὸς ἀεὶ δεῖται τροφῆς καὶ πολλῆς. Ἀφαναίνει δὲ τελέως ὅταν ἐπὶ τὰ ἄκρα συναυξηθῇ· τότε γὰρ καρπὸν πέττει καὶ ἐξαιρεῖται πανταχόθεν τὴν τροφὴν.

[4] Οὐ χαλεπὸν δ' ἴσως οὐδὲ ἐν ἄλλοις καὶ πλείοσι λαβεῖν τὰς βλάβας· πολλῷ γὰρ πλείους εἰσὶ τῶν ὠφελίμων ὥσπερ καὶ τοῖς ζώοις· ἐπεὶ καὶ ταῖς ὁσμαῖς ἓν ἡ βλάπτεται καθάπερ ἡ ἄμπελος τῇ τῆς δάφνης καὶ τῇ τῆς ῥαφάνου καὶ τοῦτο εὐθὺς ἐκδηλοῖ κατὰ τὴν βλάστησιν. Ὅταν γὰρ πλησίον ἦ τῆς ῥαφάνου καὶ τῆς δάφνης ὁ βλαστὸς ἀποστρέφεται τὸ ἄκρον αὐτοῦ καὶ ὥσπερ ἀνακάμπτει διὰ δριμύτητα τῆς ὁσμῆς· ὁσφραντικὸν γὰρ ἡ ἄμπελος ὥσπερ καὶ ὁ οἶνος δεινὸς ἐλκύσαι τὰς ἐκ τῶν προκειμένων ὁσμάς καὶ μᾶλλον καὶ θάπτον ὁ κατεσταμνισμένος διὰ τὴν ὀλιγότητα καὶ τὸ γυμνόν. Ἀλλὰ τὸ μὲν τοιοῦτον γένος ῥάδιον ἐν πολλοῖς ὥσπερ ἐλέχθη συνιδεῖν.

[19.1] Ὅσα δὲ κοινὰ γένους τινὸς ἢ καὶ πλειόνων μὴ ὁμογενῶν οἶον τὸ στρέφειν τὰ φύλλα τὴν φύλوران καὶ τὴν ἐλάαν καὶ τὴν πετέαν ταῖς τροπαῖς ταῖς θεριναῖς καὶ ὥς ἓν ἡ τῶν ἀνθῶν νύκτωρ μὲν συμμύει μεθ' ἡμέραν δὲ ἐκπετάννυται καὶ ὥς ἐν τῷ Εὐφράτῃ λέγουσιν οὐ μόνον τοῦ λωτοῦ τὸ ἄνθος

ἀνοίγεσθαι καὶ συμμύειν ἀλλὰ καὶ τὸν καυλὸν ὅτε μὲν ἀναβαίνειν ὅτε δὲ δύεσθαι καὶ καταβαίνειν ἀπὸ δυσμῶν μέχρι μέσων νυκτῶν, ὡσαύτως δὲ καὶ εἴ τι ἄλλο τοιοῦτον, ἐν ἅπασι καὶ πανταχοῦ κοινήν τινα αἰτίαν ὑποληπτέον εἶναι. Ῥᾷδιον δὲ ἴσως ἐν τοῖς ὁμογενέσιν ἰδεῖν.

[2] Ἐπὶ δ' οὖν τῶν εἰρημένων ἢ μὲν τῶν φύλλων στροφή γίνεται διὰ τὸ περὶ τοῦτον τὸν καιρὸν μάλιστα πῶς (τὰ) ἀεί(φυλλα) φυλλορροεῖν. Ἡ δ' αἰτία πρότερον εἴρηται περὶ πάντων τούτων. Γινομένης οὖν τῆς φυλλορροίας ἀνάγκη μάλιστα πάσχειν τι τὰ φύλλα καὶ τὰ μὲν ἀσθενῇ καὶ ὥσπερ γεγηρακότα καταξηρανθέντα πίπτειν τὰ δ' ἄλλα τὴν ἐπιστροφὴν μόνον λαμβάνειν. Ἄπασι μὲν οὖν τοῦτο συμβαίνει ἢ μᾶλλον ἢ ἥττον ἔνδηλον δὲ μάλιστα ἐπὶ τούτων ὅτι μεγίστη διαφορὰ τῶν χρωμάτων τοῖς πρανεῖσι πρὸς τὰ ὕπτια· τὰ μὲν (γὰρ) χλωρὰ τὰ δὲ ὑγρὰ καὶ ὑδατώδη· μᾶλλον δ' ἐπὶ τῆς φυλῦρας· μείζω γὰρ καὶ κάτω λευκότερα δι' ὃ ἀνόμοια ὡς καὶ ἐπὶ τῆς λεύκης.

[3] Τῶν δ' ἀειφύλλων οἷς μὴ συμβαίνει τοῦτο διὰ τὸ κατ' ἐκεῖνον τὸν καιρὸν ἀκμὴν τινα καὶ ὥσπερ ἰσχύν τινα εἶναι τῆς βλαστήσεως διὰ τοῦτο οὐκ ἂν συμβαίνοι· τῶν γὰρ ἰσχυόντων οὐθὲν εὐπαθές. Ἡ δὲ τῶν ἀνθῶν σύμμυσις καὶ δίοιξις ἐλαφρότερα καὶ ῥάων ἰδεῖν· ὑπὸ γὰρ τοῦ ψύχους καὶ τῆς ἀλέας γίνεται ψυχρῶν ὄντων καὶ ἀσθενῶν· συμμύει μὲν γὰρ ξυιόντος καὶ οἶον πηγνυμένου τοῦ ὑγροῦ, συναπολείπει γὰρ καὶ τὸ θερμὸν, ἀνοίγεται δὲ πάλιν διαχομένου καὶ ἀνέντος ὅπερ ὁ ἥλιος ποιεῖ.

[4] Τὰ δὲ πλέον καταδυόμενα καὶ ὑπερίσχοντα δῆλον ὅτι ψυχρότερα καὶ ἀσθενέστερα δι' ὃ μᾶλλον συμπάσχει ταῖς μεταβολαῖς. Ἡ δὲ αἴσθησις οὕτως ὀξεῖα γινομένη τοῖς καθ' ὕδατος οὐκ ἄλογος ἄλλως τε καὶ ἐν τόποις θερμοῖς καὶ ἐμπύροις. Ἐπεὶ καὶ ἐν τοῖς μὴ τοιούτοις αἱ διαδόσεις ταχεῖαι πάντων ἀπὸ τοῦ ἡλίου καὶ τῶν ἄστρον. Φαίνεται γοῦν συμπάσχειν οὐ μόνον τὰ ἐπὶ γῆς ἀλλὰ καὶ τὰ ὑπὸ γῆς ὕδατα τροπαῖς τε καὶ ἐπιτολαῖς· ἐπ' ἐνίων δὲ ἄστρον καὶ αὐτὴ ἡ γῆ καὶ ἡ θάλαττα μεταβάλλει.

[5] Πάσχει δὲ τι παραπλήσιον τούτῳ καὶ τῶν ἀνθῶν πολλὰ καθ' ἡμέραν· ἀεὶ γὰρ συμπεριφέρεται τῷ ἡλίῳ νεύοντα καὶ ἐγκλίνοντα πρὸς αὐτόν. Μᾶλλον δ' ἐστὶ τοῦτο καταμαθεῖν ἐν τοῖς ἐλάττοσιν. Ἐνίων δὲ καὶ τὰ φύλλα πάσχει ταῦτο καθάπερ τῆς μαλάχης καὶ τῶν τοιούτων· αἴτιον δὲ τοῦ ὑγροῦ ἢ ἀφαίρεσις· ἢ γὰρ ἂν ἐξάγῃ θερμαίνων ὁ ἥλιος ἐν τούτῳ ἢ ἐγκλισις. Ἐξάγει δὲ καθ' αὐτόν ὥστε τοῦτο ποιοῦντος ἐπιστρέφεται [γὰρ] καὶ περιάγεται. Τοῦτο μὲν οὖν ὡς πίστεως χάριν εἰρήσθω πρὸς τὸ πρότερον ῥηθέν.

[6] Ὑπὲρ δὲ τῶν ἄλλων ὅσα συμβαίνει τοῖς δένδροις ἢ φυτοῖς πειρατέον ἐκ

τῶν δένδρων μετιέναι καὶ θεωρεῖν τὴν ἰδίαν οὐσίαν ἐκάστου λαμβάνοντας καὶ τὴν τῆς χώρας φύσιν. Ἐκ τούτων γὰρ τὰ κοινὰ πάθη καὶ αἱ κατὰ γένη παραλλαγαὶ καὶ τὸ ἀρμόττον καὶ τὸ οἰκεῖον ἐκάστοις γίνεται φανερόν· δεῖ δὲ καὶ τὸ ὅμοιον καὶ τὸ αὐτὸ δύνασθαι θεωρεῖν· πολλὰ γὰρ δοκεῖ διαφέροντα οὐ διαφέρειν ὥσπερ καὶ ἐπὶ τῶν ἄλλων. Καὶ ταῦτα μὲν ἐνταῦθα ἐχέτω τὸ πέρας. Ὅσα δὲ κατὰ τὰς γεωργίας συμβαίνει καὶ ὧν χάρις ἕκαστα ποιοῦσιν λεκτέον ὁμοίως.

Liber III

[1] Ἡ περὶ τῶν φυτῶν θεωρία διττὰς ἔχει τὰς σκέψεις καὶ ἐν δυσὶ, μίαν μὲν τὴν ἐν τοῖς αὐτομάτοις γινομένην ἥπερ ἀρχὴ τῆς φύσεως, ἑτέραν δὲ τῶν ἐκ τῆς ἐπινοίας καὶ παρασκευῆς ἣν δὴ φαμεν συνεργεῖν τῇ φύσει πρὸς τὸ τέλος. Ἐπεὶ δὲ περὶ τῆς πρότερον εἰρηται λεκτέον ὁμοίως καὶ περὶ ταύτης ὑπὲρ αὐτοῦ τούτου πρώτου εἰπόντας ὅτι καὶ τῶν δένδρων ἓνια καὶ τῶν ἐλαττόνων ὕλημάτων οὐ δέχεται γεωργίαν. Τοῦτο γὰρ ἂν εἴη τῶν μὲν οἶον πέρας τῶν δὲ ἀρχὴ μεταβαίνουσιν ἐκ τῶν αὐτοφυῶν εἰς τὰ διὰ τέχνης.

[2] Ἀτοπον δ' ἂν ἴσως δόξειε τὸ νῦν λεχθὲν εἰ τὸ προσλαμβάνον θεραπείαν ὥσπερ χώραν οἰκείαν μὴ μᾶλλον εὐσθενεῖ καὶ καλλικαρπεῖ συνεργούσης τῇ φύσει τῆς τέχνης· ἀλλ' οὐκ ἔστιν ἄτοπον οὐδ' ἀλλότριον, ἀρχὴν δὲ αὐτοῦ ληπτέον τήνδε, τὴν φύσιν ἐκάστου μὴ ἐκ τῶν αὐτῶν εἶναι μηδὲ ἐκ μιᾶς τιнос ὕλης μηδ' αὖ πᾶσι ταῦτὸ τέλος τῆς πέψεως καὶ δυνάμεως τῶν καρπῶν ἀλλ' ἕκαστον πρὸς ὃ πέφυκε καὶ χυλοῖς καὶ ὀσμαῖς καὶ τοῖς ἄλλοις. Μάλιστα δὲ πως ἐν δυοῖν τούτοις ὀρίζομεν τὴν πέψιν ὀσμαῖς καὶ χυλοῖς ἀναφέροντες καὶ ταῦτα πρὸς τὴν ἡμετέραν χρείαν ὥσπερ διωρίσθη καὶ πρότερον.

[3] Ἐπεὶ δ' ἐξ ὧν συνέστηκεν ἕκαστον καὶ τρέφεται καὶ τὸ πρόσφορον οὐ κατὰ τὸ ποιὸν μόνον ἐστὶν ἀλλὰ καὶ κατὰ τὸ ποσὸν ἐν ἀμφοτέροις ἂν εἴη τούτοις τὸ οἰκεῖον. Ἡ δὲ γεωργία πληθὸς τε τροφῆς καὶ ποιότητα κατασκευάζει. Κατεργαζομένη γὰρ ἡ γῆ καὶ ἀπόλαυσιν πλείω δίδωσι καὶ μεταβάλλει τοὺς χυλοὺς, ὥστ' εὐλόγως οὐκ ἂν εἴη πρόσφορος ἐνίοις οἶον ὅσα ξηρά τε καὶ δριμέα καὶ πικρὰ καὶ ἀπλῶς ὅσα φαρμακώδη, καὶ ἐν τούτοις παρέχεται τὴν χρείαν ἡμῖν· ἐκθηλύνεται γὰρ ἀφαιρουμένων τῶν δυνάμεων καὶ τὰ μὲν ὅλως οὐκ ἐκφέρει καρποὺς τὰ δ' ὑγροτέρους καὶ χεῖρους, τὰ δὲ καὶ αὐτὰ ὑδαρέστερα γίνεται καθάπερ τὸ ἀψίνθιον καὶ τὸ κενταύριον καὶ ὅλως δὲ πᾶσα φαρμακώδης δύναμις ἢ κατὰ ρίζαν ἢ κατὰ καυλὸν ἢ κατὰ καρπὸν ἢ κατὰ κλῶνας·

[4] ἀνὰ λόγον δὲ τούτοις καὶ ὅσα δριμύτητά τινα ἔχει δῆλην κατὰ τὴν γεῦσιν. Ὡν καὶ ἡ κάππαρις ἔοικεν εἶναι καὶ τὸ σίλφιον καὶ τὸ λάπαθον καὶ ἡ θύμβρα καὶ τὸ θύμον· τὰ μὲν γὰρ ὅλως οὐδὲ φύεται τούτων ἐν τοῖς ἡμέροις ἢ κακῶς τὰ δὲ χεῖρω πολλῶ καθάπερ τὸ λάπαθον καὶ ἡ θύμβρα καὶ ἡ κάππαρις, ἓνια δὲ καὶ τὰς γλυκύτητας αὐτῶν ἀποβάλλει καθυγραινόμενα καὶ πληθυνόμενα ταῖς τροφαῖς ὥσπερ τὸ κράνον, καὶ γὰρ τοῦτο χεῖρον ἡμερούμενον γίνεται καὶ ἀπλῶς δὲ αὐτὸ τὸ δένδρον ὑδαρές τε καὶ μανὸν καὶ

ἀσθενές. Τῆς δ' οἷης γλυκύτερος μὲν ὁ καρπὸς ἦττον δ' εὐώδης· ἀφαιρεῖται γὰρ τὴν εὐτροφίαν καὶ τὸ εὖοσμον.

[5] Ὁ δ' αὐτὸς λόγος καὶ περὶ σιλφίου καὶ θέρμου καὶ εἴ τι τοιοῦτον ἕτερον. Τὸ μὲν γὰρ οὐχ ὁμοίως ἔχει τὴν δριμύτητα διὰ τὸ πλείω καὶ ὕδαρεςτέραν εἶναι τὴν τροφήν, ὁ δὲ θέρμος ἄκαρπος γίνεται καθάπερ ὕλομανῶν καὶ ἐξυβρίζων· ποιεῖ γὰρ καὶ ταύτην τὴν ἐναντίωσιν (ἢ) κατεργασία καθάπερ εἴρηται πλῆθος παρέχουσα τροφῆς· ἐκ δὲ τῆς ἀρχῆς ταμιεύεται τὸ σύμμετρον ἕκαστον ἑαυτῷ καὶ λαμβάνει τὴν οἰκείαν χώραν. ἢ γὰρ αὐτοφυῆς γένεσις ἐν ταύταις.

[6] Ἀπλῶς γὰρ τὸ μέγιστον ὥσπερ πολλάκις εἴρηται τὸ λαβεῖν οἰκεῖον ἀέρα καὶ τόπον· ἐκ τούτων γὰρ ἡ εὐθένεια καὶ εὐκαρπία. Ταῦτα δ' ἐναντία φαίνεται τοῖς παρὰ φύσιν ἡμερουμένοις· εἷς τε γὰρ ἀέρα μαλακώτερον μετατεθέντα καὶ τροφήν ἀλλοιοτέραν λαμβάνοντα ἐξ ἀμφοτέρων τούτων ἢ μεταβολὴ καὶ οἶον ἕκστασις τῆς φύσεως. Ἐπιμαρτυρεῖ δὲ πῶς καὶ ἐν αὐτοῖς τοῖς γεωργουμένοις τὸ μὴ φιλεῖν ἔνια τὴν ἀκριβῆ καὶ τὴν πολλὴν ἄγαν ἐξεργασίαν ὥστε καὶ ταύτην ζητεῖν τινα ὅρον· καὶ τρόπον τινὰ οὐδὲν κωλύει κατὰ τὴν μετάβασιν οὕτως ἔνια μὴδὲ ζητεῖν ὅλως. Ὅτι μὲν οὖν οὐ πάντα προσδέχεται τὰς γεωργίας φανερόν· ἔστω διὰ τούτων· ἴσως γὰρ τὰ μὲν ὅλως οὐ δεῖται τῶν δ' οὐκ ἐξευρίσκομεν τὰς αἰτίας.

[2.1] Ἡ δὲ γεωργία, δυοῖν ὄντων ἐξ ὧν αἱ τροφαὶ καὶ εὐσθένειαι τῆς τε γῆς (καὶ τοῦ ἀέρος, τὴν ἀπὸ τῆς γῆς) παρασκευάζει βοήθειαν· τὸν ἀέρα γὰρ οὐκ ἐπ' αὐτῇ ποιόν τινα ποιεῖν ἀλλὰ δεῖ πρὸς τὰς μεταβολὰς τὰς κατὰ τὰς ὥρας γινομένας αὐτὰ τὰ δένδρα καὶ τὴν χώραν διακεῖσθαι πῶς ἵνα τε ἀπολαύῃ τῆς πρὸς αὔξησιν τροφῆς καὶ μὴ πάσχη μὴδὲν ὑπὸ τῶν ἐναντίων· δεῖ γὰρ καὶ πρὸς ταῦτα φυλακῆς, λέγω δ' οἶον τομάς τε καὶ διακαθάρσεις καὶ βλαστολογίας καὶ κοπρίσεις καὶ σκαπάνην καὶ ὅσα ἄλλα πραγματεύονται.

[2] Καὶ περὶ τῆς ἀροσίμου δὲ καὶ σπερματουμένης ὁμοίως. Τοῖς μὲν γὰρ οὐ ταῦτα τοῖς δ' οὐκ ἴσα τοῖς δ' οὐ τὸν αὐτὸν τρόπον οὐδὲ τὴν αὐτὴν ὥραν ἀποδιδόναι δεῖ, τοῖς δὲ ἴσως οὐδὲ ποιεῖν ἔνια τὸ ὅλον. Ἄ δὴ καὶ φαίνονται διαιροῦντες οἱ γεωργοὶ καθάπερ καὶ ἐν τῇ διακαθάρσει τὰ μὲν σιδήροις τὰ δὲ ταῖς χερσὶ τὰ δ' ἀγκύραις τισὶ κελεύοντες ἀφαιρεῖν, οἶον τῆς τε ἐλάας καὶ τῆς ἀπίου καὶ τῆς μηλέας ὅπως μὴ ἐλκόμενα πονῇ διὰ τὴν λεπτότητα καὶ ξηρότητα τῶν κλάδων. Καὶ γὰρ ἀφαιρεῖν δεῖ τούτων τὰ αὐὰ τε καὶ τὰ τρώξανα μόνον.

[3] Ὅμοίως δὲ καὶ τῶν ἀμπέλων διαιρετέον τὰς τε πρωτοτόμους καὶ τὰς

ὀπιτόμους καὶ τὰς βραχυτόμους καὶ τὰς μακροτόμους καὶ τοῖς ἄλλοις ὡσαύτως ἀναφέροντας ἀεὶ πρὸς τὸ τέλος. Ὁ μὲν οὖν σκοπὸς οὗτος καὶ ἡ καθ' ἑκάστα διαίρεσις. Ὑπὲρ ἐκάστου δέ ἐστιν ὁ λόγος ὁ τὴν αἰτίαν ἔχων ἣν δεῖ μὴ λανθάνειν· ὁ γὰρ ἄνευ ταύτης ποιῶν καὶ τῷ ἔθει καὶ τοῖς συμβαίνουσι κατακολουθῶν κατορθοῖ μὲν ἴσως οὐκ οἶδε δὲ καθάπερ ἐν ἱατρικῇ (τὸ διὰ τί) τὸ δὲ τέλειον ἐξ ἀμφοῖν. Ὅσοι δὲ καὶ τὸ θεωρεῖν μᾶλλον ἀγαπῶσιν αὐτὸ τοῦτο ἴδιον τοῦ λόγου καὶ τῆς αἰτίας.

[4] Ἀντιλέγεται δὲ περὶ πολλῶν καὶ τὰ μὲν ἀπλῶς τὰ δ' εἰς τὸ βέλτιον καὶ χεῖρον ὥσπερ κατὰ τὰς ἄλλας τέχνας. Ἐνταῦθα δὲ καὶ ἰδιώτερόν τι συμβαίνει. Πρὸς γὰρ τὴν ἑαυτῶν ἔνιοι χώραν τετραμμένοι τὰ πρόσφορα πολλάκις καθόλου λέγουσιν. Ὅτε δὲ καὶ ἀμφοτέρως γινομένων ἄκριτόν ἐστι τὸ βέλτιον· ὅποια γὰρ ἂν ἦ τὰ ἀπὸ τοῦ ἀέρος συμβαίνοντα τοιαῦτα ἀποβαίνει καὶ κατὰ τὰς ἐργασίας.

[5] Οὐδὲ γὰρ δεῖ μᾶλλον ἀκολουθεῖν τῇ τοῦ ὅλου καταστάσει καὶ περιφορᾷ (ἢ τῇ φύσει) τῶν δένδρων καὶ φυτῶν καὶ σπερμάτων ὡς πολλάκις τὰ ἀμαρτανόμενα τῇ ἀπὸ τούτου ἀκρασίᾳ τῇ αὐτῶν δυνάμει τὰ μὲν ὑπομένει τὰ δὲ τινα ἀναμάχεται καθάπερ καὶ τῶν ἀνθρώπων ἡ φύσις τὰ ὑπὸ ἱατρικῆς. Ὡστε αἱ μὲν ἀντιλογίαι πρὸς ταῖς κοιναῖς τῶν τεχνῶν καὶ διὰ ταύτας γίνονται τὰς αἰτίας. Οὐ μὴν ἀλλὰ καὶ συνομολογεῖται πολλὰ καὶ παρὰ πάντων, ὥσπερ ἐξ αὐτῶν τῶν πραγμάτων εἰληφότα πίστιν, τὰ μὲν καθόλου τὰ δὲ διαιρούμενα γένεσι καὶ χώραις οἷον εὐθύς τὰ περὶ γενέσεις καὶ φυτείας ὑπὲρ ὧν οὐ χαλεπὸν εἰπεῖν τὰς αἰτίας.

[6] Αἰεὶ γὰρ δεῖ φυτεύειν καὶ σπείρειν εἰς ὀργῶσαν τὴν γῆν· οὕτω γὰρ καὶ ἡ βλάστησις καλλίστη καθάπερ τοῖς ζώοις ὅταν εἰς βουλομένην πέσῃ τὸ σπέρμα τὴν ὑστέραν. Ὅργᾳ δ' ὅταν ἔνικμος ἦ καὶ θερμὴ καὶ τὰ τοῦ ἀέρος ἔχη σύμμετρα· τότε γὰρ εὐδιάχυτός τε καὶ εὐβλαστής καὶ ὅλως εὐτραφής ἐστι. Τοῦτο δ' ἐν δυοῖν ὥραιν γίνεται μάλιστα τοῖς γε δένδροις ἔαρι καὶ μετοπώρῳ καθ' ὅς καὶ φυτεύουσι μᾶλλον, καὶ κοινοτέρως ἐν τῷ ἥρι· τότε γὰρ ἢ τε γῆ δίνυγρος καὶ ὁ ἥλιος θερμαίνων ἄγει καὶ ὁ ἀήρ μαλακός ἐστι καὶ ἐρσώδης ὥστε ἐξ ἀπάντων εἶναι τὴν ἐκτροφὴν καὶ τὴν εὐβλαστίαν.

[7] Ἐχει δὲ τινα καὶ τὸ μετόπωρον τοιαύτην κρᾶσιν δι' ἣν καὶ τὰς ἐπιβλαστήσεις ἔφαμεν γίνεσθαι τῶν δένδρων. Οἱ δὲ ἐπαινοῦντες αὐτὴν μᾶλλον τοῦ ἔαρος τοιαῦτα λέγουσιν ὅτι τὰ φυτὰ θερμῆς οὔσης ἔτι τῆς γῆς ρίζουται κάλλιον· δεῖν δ' αἰεὶ τὴν ἀρχὴν ἰσχυροτέραν ποιεῖν ἀφ' ἧς καὶ ἡ τῶν ἄλλων γένεσις καὶ ὅλως ἡ ζωὴ δι' ἣν καὶ τὴν βλάστησιν ἅμα τῷ ἥρι καλὴν

γίνεσθαι καὶ ἀθρόαν ἐκβεβηκυίας ἤδη καὶ κυούσης τῆς ρίζης, τοῦ δὲ ἥρος εἰς ψυχρὰν τιθεμένων τὴν γῆν, ψυχρὰν γὰρ ἔτι διαμένειν ἐκ τοῦ χειμῶνος, ῥιγοῦν καὶ κακοβλαστεῖς γίνεσθαι τὰς ρίζας.

[8] Καὶ διὰ τοῦτο πάντα κελεύουσι τοῦ μετοπώρου μᾶλλον φυτεύειν ὅσα δύναται βλαστάνειν· ἓνια γὰρ οὐ δύναται καθάπερ ἄπιος καὶ μηλέα καὶ ὅλως τὰ λεπτὰ καὶ ξυλώδη· καὶ γὰρ ξηρὰ φύσει καὶ διὰ τὴν ἀσθένειαν οὐχ ὑπομένει τοὺς χειμῶνας. Ἔτι τὸ μὲν μετοπωρινὸν ἔγκυμον εἶναι καὶ ἐπιφορον τὸ δὲ ἔαρινὸν ἄρτι κυΐσκεσθαι· τὸ δὲ τίκτειν ἀμφοτέροις τὴν αὐτὴν ὥραν ὥστε συμβαίνειν τῷ μὲν ἄρτι κυΐσκομένῳ πολλὰ τυφλὰ τίκτειν τῶν βλαστημάτων τῷ δὲ πάλαι κύοντι καὶ ἐπιφόρῳ τὰ πλεῖστα τέλεα καὶ καλὰ. Σχεδὸν γὰρ ταύτας καὶ τοιαύτας λέγουσι τὰς αἰτίας.

[3.1] Οὐ μὴν ἀλλὰ καθάπερ εἴρηται κοινοτέρα πᾶσιν ἢ τοῖς πλείστοις καὶ δένδροις καὶ φυτοῖς ἢ τοῦ ἑαρός ἐστίν· αὐτὰ τε γὰρ τὰ φυτὰ προωρημένα καὶ ὁ ἄηρ μαλακὸς καὶ εὐβλαστῆς καὶ ὅλως ἢ ὥρα γονιμωτάτη καὶ αἱ ἡμέραι θερμότεραι καὶ μῆκος ἔχουσαι ταχεῖας ποιοῦσι τὰς βλαστήσεις. Ἡ δὲ ρίζωσις ἰσχυρὰ καὶ οὕτω διὰ τε τὴν τῶν φυτευτηρίων ὀρμὴν, εἰς ἄμφω γὰρ ὁμοίως ἐστὶ, καὶ διὰ τὸ τὴν γῆν ὀργᾶν καὶ ἔτι τὸν ἀέρα συνεκτρέφειν. Ὁ γὰρ ἥλιος οὐ μόνον δοκεῖ τὰ ὑπὲρ γῆς ἀλλὰ καὶ τὰ ὑπὸ γῆς εὐτραφέστερα καὶ καλλίω ποιεῖν. Σημεῖον δ' ὅτι τῶν ριζῶν ἢ βλάστησις ἢ οὐ γίνεται πορρωτέρω τῆς τοῦ ἡλίου δυνάμεως ἢ χεীরων.

[2] Ὁ δὲ χειμὼν ἐπιλαμβάνων τὴν φυτείαν ἑνία γε δοκεῖ φθείρειν οἷον τῆς μὲν ἐλάας ἀφιστὰς τὸν φλοιὸν τῆς δὲ συκῆς παχύνων καὶ πηγνὺς τὸν ὀπὸν τὸν ἐν τῇ κράδῃ καὶ τῶν ἄλλων σχεδὸν τῶν πλείστων τοιοῦτόν τι πονούντων. Ἀλλὰ γὰρ ταῦτα μὲν ἴσως ἀφορίζοιτ' ἂν ὁ φάσκων τὴν μετοπωρινὴν εἶναι τὴν βελτίῳ τοῖς δεχομένοις λέγων. Εἰ δὲ πλείῳ ταῦτα τῆς φύσεως αὐτῆς ἐστὶ σημεῖα τῶν πρὸς τὴν φυτείαν ὥρων τό τε παρορμᾶν αὐτὰ τὰ δένδρα τοῦ ἥρος καὶ τὸ κοινοτέραν εἶναι πᾶσι ταύτην, δῆλον ὡς φυσικωτέραν ἂν τις θεῖη ταύτην.

[3] Ἐπεὶ καὶ ὅπου περὶ κύνα καὶ τοὺς ἐτησίας εὐθενεῖ καὶ ἐπιβλαστάνει τὰ δένδρα τῆνικαῦτα καὶ τὰς φυτείας ποιοῦνται, πολλῷ δέον ἀκολουθεῖν τῇ τοῦ ἀέρος κράσει καὶ τῇ τῶν φυτῶν ὀρμῇ. Τάχα δὲ καὶ ἡ ὀρμὴ γίνεται διὰ τὸ περιέχον· ὅπου δ' αὖ θερινὸς ὄμβρος πολὺς ὥσπερ ἐν Αἰθιοπία καὶ ἐν Ἰνδοῖς ἢ περὶ Αἴγυπτον ὁ Νεῖλος ἐνταῦθα δὴ πρὸ τούτων ἢ μετὰ τούτους εἰκὸς τὴν φυτείαν ἀρμόττειν· τῆνικαῦτα γὰρ ἡ τοῦ ἀέρος κρᾶσις σύμμετρος.

[4] Εἴη δ' ἂν διελεῖν καὶ τοῖς κατὰ φύσιν τόποις πρὸς τὰς ὥρας, οἷον τοὺς

μὲν εὐκράτους τῷ ἀέρι τοῦ ἥρος τοὺς δὲ ῥοώδεις καὶ ἐπόμεβρους καὶ ἐλείους
θέρους ὑπὸ τὸ ἄστρον ὥσπερ καὶ ἐν Λακωνικῇ πολλὰ φυτεύουσι, τοὺς δ'
αὐχμώδεις μετοπώρου. Συμβήσεται γὰρ οὕτω θερμῆς οὕσης ἐν βάθει τῆς γῆς
κατὰ χειμῶνα ψυχροῦ δὲ τοῦ πέριξ τὴν αὕξησιν κατακλειομένην εἰς τὰς ρίζας
ιέναι. Πλείονος δ' ὄντος καὶ ἰσχυροτέρου τοῦ ριζώματος πλείων ἢ βλάστησις
ἔσται καὶ καλλίων. Καὶ περὶ μὲν ὥρων τῶν εἰς τὰς φυτείας ἱκανῶς εἰρήσθω.

[4.1]

Ἐπεὶ δὲ ὑπόκειται τὴν γῆν ἐνικμόν τε δεῖν καὶ εὐδίοδον εἶναι ταῖς ρίζαις
ὅπως εὐμήκεις καὶ παχεῖαι καὶ ἰσχυραὶ γίνωνται διὰ ταῦτα δεῖ τοὺς γύρους
προορύττειν ἐκ πολλῶν μάλιστα δὲ ἐνιαυτῷ πρότερον ὅπως ἡ γῆ καὶ ἡλιωθῇ
καὶ χειμασθῇ καθ' ἑκατέραν τὴν ὥραν. Ἄμφω γὰρ ταῦτα ποιεῖ μανὴν καὶ
χαύνην. Ἐνιοὶ δὲ καὶ διορίζουσι τοὺς χρόνους· ἀπὸ γὰρ τροπῶν θερινῶν μέχρι
ἀρκτούρου· τότε γὰρ τὴν τε γῆν διαχεῖσθαι μάλιστα καὶ τὴν ἔξω καὶ τὴν ἐν
τοῖς γύροις καὶ βλαστάνειν ὅλως οὐδέν. Φυτεύουσι δὲ τὴν μετοπωρινὴν
φυτεῖαν μετὰ πλειάδος δύσιν δεξάμενοι τὸ ἐπὶ τῷ ἄστρῳ ὕδωρ ὅπως ἐνικμος ἡ
γῆ γενομένη παρέχῃ τροφήν.

[2] Καὶ τοὺς γύρους οὐκ εὐθὺς συμπληροῦσιν ὅπως ριζωθῇ τὰ κάτω
πρότερον, εἰ δὲ μὴ φέρονται πρὸς τὸ ἄνω· τρέφει γὰρ καὶ αὔξει πάνθ' ὁ ἥλιος
καὶ ὁ ἀήρ. Ὅντων δὲ τῶν μὲν βαθυρρίζων τῶν δ' ἐπιπολαιορρίζων διὰ τοῦτο
τοὺς γύρους οὐκ ἰσοβαθεῖς ὀρύττουσιν (ἀλλὰ βαθυτέρους) τοῖς
ἐπιπολαιορρίζοις οἷον ἐλάα καὶ συκῇ βουλόμενοι πέζεσθαι καὶ ὥσπερ
ἀντιταττόμενοι πρὸς τὰς φύσεις.

[3] Ὅπως δὲ καὶ τῶν ὑδάτων τοῦ χειμῶνος ἀπολαύωσι καὶ τοῦ θέρους
καταψύχωνται, δεῖ γὰρ διὰ πρὸς ἀμφοτέρας τὰς ὥρας παρεσκευάσθαι, διὰ
τοῦτ' ὑποβάλλουσι κάτω λίθους ὅπως συρροὴ γίνηται τοῦ ὕδατος καὶ τοῦ
θέρους οὗτοι καταψύχωσι τὰς ρίζας. Οἱ δὲ κληματίδας ὑποτιθέασιν οἱ δὲ
κέραμον παρακατορύττουσιν ὕδατος οἱ δὲ ξύλον κνημοπαχὲς εἶτ' ἐξαίρουσιν
ὅπως ἔχῃ τροφήν ἀεὶ τὰ φυτὰ διῦκμαζομένης τῆς γῆς καὶ συρρεόντων τῶν
ὑδάτων. Ἀπλῶς γὰρ τοῦτο δεῖ τηρεῖν ὅπως καὶ πρὸς τοὺς ὄμβρους τοὺς
γινομένους καὶ πρὸς τὸν ἀέρα καὶ τὸν ἥλιον ἔξει συμμετρῶς· αἱ γὰρ τροφαὶ
καὶ αἱ αὐξήσεις διὰ τούτων.

[4] Ἐπεὶ δὲ ἡ γῆ βορείοις καὶ πεπηγυῖα καὶ ξηρὰ νοτίοις δὲ κεχυμένη καὶ
ἐνικμος ὡσαύτως δὲ καὶ τὸ φυτὸν ὑγρότερον καὶ (ξηρότερον) αὐτὸ ἑαυτοῦ
μᾶλλον διὰ ταῦτα βελτίων ἢ τοῖς νοτίοις φυτεῖα· ταχεῖα γὰρ ἡ ριζώσις καὶ ἡ
βλάστησις ὅταν ὀργῶν εἰς ὀργῶσαν τεθῇ καὶ τὰ τοῦ ἀέρος ἢ μαλακὰ καὶ
εὐμενῇ· δεῖ γὰρ διὰ τὸ μέλλον ἔσεσθαι καλὸν ἅμα κάτωθεν καὶ ἄνωθεν

βλαστάνειν. Τοῖς δὲ βορείοις ἅπαντα τάναντία γίνεται ῥιγοῦν τε καὶ κακοπαθεῖν τὰ φυτὰ· ἔτι δὲ τῆς γῆς πεπηγυίας οὔτε ῥιζοῦσθαι δύναιντ' ἂν ὁμοίως οὔτε βλαστάνειν. Ἡ μὲν οὖν τοιαύτη παρατήρησις τοῦ ἀέρος ἂν εἴη.

[5.1] Τὰ δὲ φυτευτήρια δεῖ λαμβάνειν ἀπὸ νέων τε τῶν δένδρων ἢ ἀκμαζόντων καὶ ὅλως λειότατα καὶ εὐθύτατα καὶ ὡς κάλλιστα· καὶ γὰρ ἀντιλαμβάνεται καὶ ἰσχύει τὰ τοιαῦτα μάλιστα καὶ διὰ τὴν ἡλικίαν καὶ τὸ πάχος εὐβλαστότερα τυγχάνει· τὸ γὰρ λεῖον ὥσπερ ὑγιὲς καὶ ἀπῆρωτον τὸ δὲ τραχὺ καὶ ὠζωμένον ἄλλως τε τυφλοῖς ὄζοις ὥσπερ πεπηρωμένον, ἐάν τε ζῶσι τὸ ἐκβεβλασθηκὸς ἐκ τούτων ἀσθενέστερον ὅσων μὴ καὶ ἡ φύσις τοιαύτη καθάπερ τῶν κλημάτων· διὰ τοῦτο γὰρ καὶ ἐπὶ τῶν δένδρων ἔνιοι μοσχεύουσιν οἱ δὲ περιαιροῦσι τὴν θάλειαν τῶν κλάδων ὅπως μὴ ἐξαναλώσῃ τὴν δύναμιν εἰς τὴν βλάστησιν.

[2] Ἔτι δ' εὐθύτης λειότης τε εὖρουν καὶ εὐδίοδον ποιεῖ τὴν ῥοὴν ὥστε ταχείας εἶναι τὰς αὐξήσεις. Ὅρθως δὲ καὶ τὸ μᾶλλον ἐξ ὁμοίας γῆς εἰ δὲ μὴ ἐκ χείρονος λαμβάνειν· ἡ μὲν γὰρ οὐδεμίαν ποιήσει μεταβολὴν ἢ δ' ἐπὶ τὸ βέλτιον συντροφοῦντος· μέγα δὲ αἱ μεταβολαὶ ταῖς ἀσθενέσιν, ἀσθενὲς δὲ τὸ φυτόν. Διὰ τοῦτο γὰρ καὶ τὰς θέσεις τῶν φυτευμάτων τὰς αὐτὰς ἀποδιδόασιν κατὰ τὰ πρόσβορρα καὶ νότια καὶ πρὸς ἕω καὶ δυσμὰς ὡς ἐπὶ τῶν δένδρων εἶχε βουλόμενοι τηρεῖν μάλιστα καὶ μηθὲν τῆς φύσεως καὶ τῶν εἰωθότων μετακινεῖν ὡς οὐκ ἂν ῥαδίως ἐνεγκόντων μεταβολὴν·

[3] ἐπεὶ καὶ τοὺς τόπους ὅτι μάλιστα ὁμοίους ζητοῦσι διὰ τὰς αὐτὰς αἰτίας καὶ προμοσχεύοντες φυτεῦουσιν· ἰσχυρότερα γὰρ καὶ ὥσπερ ἤδη βεβιωκότα. Καὶ τὰ φυτὰ μάλιστα μὲν ὑπόρριζα λαμβάνουσιν, ἔχει γὰρ εὐθύς καὶ ἀρχάς· εἰ δὲ μὴ μᾶλλον ἀπὸ τῶν κάτω ἢ τῶν ἄνω καὶ γὰρ ταῦτα ἐμβιώτερά ἐστι πλὴν ἀμπέλου καὶ συκῆς καὶ εἴ τι ἄλλο ὑγρὸν ὥσπερ εἴρηται. Τὰ γὰρ ὑγρά κάλλιον ἀπὸ τῶν ἄνω βλαστάνει τὰ δ' ἄλλα διὰ τὴν ξηρότητα καὶ τὴν λεπτοδερμίαν τὰ μὲν ὅλως οὐ βλαστάνει τὰ δὲ χεῖρον· τὸ δ' ὑπόρριζον ὡς προπεπονημένον τι τῆς φύσεως ἔχει καθάπερ τὸ μεμοσχευμένον ᾧ δεῖ χρῆσθαι.

[4] Καὶ διὰ τοῦτο βέλτιον λέγουσιν ὀρθὰ κελεύοντες τὰ τοιαῦτα τιθέναι καὶ μὴ ὑποβάλλοντές τι μέρος ὥσπερ τοῖς ἀρρίζοις ὅπως ἡ ῥίζα βλαστάνῃ. Συμβαίνειν γὰρ δοκεῖ πλαγίων τιθεμένων ἀφαναίνεσθαι τὰς πρότερον, ἄτοπον δὲ ζητεῖν ἐτέρας ἀποβάλλοντα τὰς ὑπαρχούσας. Ὅρθως δὲ καὶ τὸ μὴ πολὺ τῆς γῆς ὑπερέχειν τὸ φυτόν, εἰ δὲ μὴ γίνεται δυσανξὲς ὅταν ἡ πλεον τοῦ τρεφομένου τὸ πονοῦν. Ἐνια δὲ καὶ ἀφαναίνεται καθάπερ ἡ συκὴ καὶ εἴ τι ἄλλο μανόν· ἅμα δὲ καὶ ἀθροωτέρα φέρεται μᾶλλον ἢ τροφή πρὸς τὴν

βλάβησιν, ὃ καὶ ἐπὶ τῶν κατακοπτομένων συμβαίνει.

[5] Τὰ γὰρ παρὰ τὴν γῆν ὅτι μάλιστα κοπέντα θᾶπτον παραγίνεται τῶν ἐν ὕψει. Φανερόν δὲ καὶ ἐπὶ τῶν τῆς ἀμπέλου φυτῶν καὶ εἴ τι ἄλλο τομὴν ζητεῖ κατὰ τὴν φυτεῖαν. Τῶν δὲ τῆς ἐλάας καὶ τῶν μυρρινῶν καὶ ὅλως ὅσα φύεται μείζω πάντων ἀποστέγουσι τὰς τομὰς ὅπως μήθ' ἥλιος μήθ' ὕδωρ λάβῃ· κίνδυνος γὰρ νοσῆσαι ῥαγύν. Περιαλείφουσι δὲ οἱ μὲν πηλὸν μόνον οἱ δὲ σκίλλαν ὑποτιθέντες εἴτ' ἄνωθεν τὸν πηλὸν ἐπὶ τούτῳ δὲ τὸ ὄστρακον· δοκεῖ γὰρ ἡ μὲν σκίλλα χλωρὸν παρέχειν ὁ δὲ πηλὸς ἐκείνην τηρεῖν τὸ δ' ὄστρακον τὸν πηλόν.

[6.1] Ἡ δὲ κόπρος ὅτι μὲν καὶ μανοῖ τὴν γῆν καὶ διαθερμαίνει δι' ὧν ἀμφοτέρων ἡ εὐβλάστεια φανερόν. Ὑπὲρ δὲ τῆς χρήσεως διαμφισβητοῦσι καὶ οὐχ ὡσαύτως χρῶνται πάντες ἄλλ' οἱ μὲν εὐθὺς ἀναμίζαντες τῇ γῇ πρὸς τὸ φυτὸν προσβάλλουσιν οἱ δ' ἀνὰ μέσον ποιοῦσι τῆς τε πρώτης γῆς καὶ τῆς ἐπ' ἄνω· κάτωθεν γὰρ παραβαλλομένην εἰς τὸ ἄνω φέρεσθαι φασιν ὅταν ὕσῃ· βέλτιστον γὰρ εἶναι τὸν χυλόν, ἄνωθεν δ' ἐξικμάζεσθαι ὑπὸ τοῦ ἡλίου καὶ ὕοντος οὐ διῖκνεῖσθαι τὰ κάτω.

[2] Πάντες δὲ τό γε τοσοῦτον συμφωνοῦσιν ὥστε μὴ δριμεῖαν καὶ ἰσχυρὰν ἀλλὰ κούφην δι' ὃ καὶ μάλιστα χρῶνται τῇ τῶν λοφούρων· ἡ γὰρ δριμεῖα καὶ ἰσχυρὰ διαθερμαίνει μᾶλλον ἢ καὶ ξηραίνει. Χρὴ δὲ καὶ πρὸς τὴν χώραν ἐκάστην ποιεῖν τὸ ἀρμόττον· οἷον ἐὰν μὲν τις ἐν ἐμπύρῳ τόπῳ φυτεύῃ τοὺς γύρους ὕδατος ἐμπιπλάναι πρότρυπα καὶ ἐπειδὴν ἀναπίωσι καταβάλλειν ὅπως ἔνικμος ἡ γῇ γενομένη μᾶλλον δέχεται καὶ καλλίῳ ποιῇ τὴν ρίζωσιν.

[3] Ἐὰν δὲ ἐν ἀλμῳδαίῃ ἢ ἐφάμμῳ λίθους περιτιθέναι περὶ τὸ πρέμνον τοῦ φυτευτηρίου καὶ περιχωρῶναι γῆν ὅπως ἀποστέγωσι τὴν ἀλμυρίδα. Συμφέρει δὲ καὶ ἄμμον ποτάμιον παραβάλλειν καὶ ψήφους ἐκ ποταμοῦ ἢ χαράδρας· ἀποστέγει γὰρ καὶ ταῦτα καὶ ἅμα δι' αὐτῶν παρέχεται τινα δύναμιν. Ἐὰν δ' ἐν ἐφύδρῳ καὶ ναματώδει τάφρους ὀρύσσοντα τὰς μὲν πλαγίους ἵνα τὸ ὕδωρ δέχωνται τὰς δὲ ὀρθίας καὶ λίθων πληροῦντα καὶ γῆς ὥστε μὴ ἅπτεσθαι τῆς σκαπάνης εἴτα ἄμμον ἐμβάλλοντα καὶ χοῦν·

[4] ἅπαντα γὰρ ταῦτα ὠφελεῖ πρὸς τὴν ὑπερβολήν. Αἱ τε γὰρ πλάγιοι τάφροι δεχόμενοι τὸ ὕδωρ ξηροτέραν ποιοῦσι αἱ τ' ὀρθιαί κάτω λίθους ἔχουσαι δέχονται τὴν συρροήν, ἔτι δ' ἡ ἄμμος καὶ ὁ χοῦς ἀναξηραίνουσι· διὰ τοῦτ' οὐδ' ἐὰν που ἐνῶσι λίθοι ταῖς τοιαύταις οὐκ ἐκλεκτοί, ὑπάρχει γὰρ φύσει τὸ βοηθοῦν· ὅλως ἐν ὁποιαοῦν ἐὰν ὀρύττων τις λίθους εὖρη ἢ τρόχμαλον ἢ ἄμμον ἢ γῆν μοχθηρὰν οὐκ ἄκος τὸ μὴ συμμιγνύναι μηδὲ

σκεδαννύναι ταύτην ἀλλὰ τοσοῦτω βαθύτερον τὸν γύρον ἢ τὴν τάφρον ὀρύξαντα τὸν τε τρόχμαλον ὑποστρωννύναι καὶ τὴν ἄμμον.

[5] Ὁ μὲν γὰρ λίθος ὁ μὲν πλατὺς καὶ συμφυῆς βλάπτει τὰ δένδρα ὁ δὲ τρόχματος ὑποκάτω τεθεὶς ψύχος τε παρέχεται τό θ' ὕδωρ δέχεται καὶ ταῖς ῥίζαις εὐδίοδον ποιεῖ τὸν τόπον. Ἀπλῶς δὲ τοὺς γε λίθους ἐκλέγειν οὐδ' ἐκ γῆς ψιλῆς οἶονταί τινες συμφέρειν· καὶ γὰρ ἀλέαν παρέχειν τοῦ χειμῶνος καὶ ψύχος τοῦ θέρους. Ὅμοίως δὲ καὶ κατὰ τὰς ἄλλας διαφορὰς τῆς χώρας τὰ πρόσφορα ληπτέον. Ὡς γὰρ ὅλως εἰπεῖν οὐδενὸς ἔλαττον ἀλλὰ πάντων πρῶτον καὶ μέγιστον τὸ δύνασθαι θεωρῆσαι ποῖον ἐν ποίᾳ χώρᾳ φυτευτέον οὐ μόνον ἀπλῶς ἀλλὰ καὶ αὐτῆς τῆς συνεχοῦς ὅταν ἀνωμαλῆς ᾖ κατὰ τοὺς τόπους ἐκάστους.

[6] Ὡς περ γὰρ λέγεται πολλάκις ἡ οἰκεία μεγίστην ἔχει ῥοπὴν καὶ πρὸς ἀντίληψιν καὶ πρὸς εὐκαρπίαν ὃ καὶ καθ' ὅλων τῶν γενῶν ἐστίν καὶ ἐν αὐτοῖς τοῖς ὁμοειδέσιν. Οἶον ὡς μὲν ἀπλῶς εἰπεῖν ἡ συκὴ φιλεῖ τοὺς ξηροὺς τόπους· οἱ γὰρ ὕγροι σήπουσιν ἢ οὐ καλῶς πεπαίνουσι διὰ τὸ καὶ αὐτὸν εἶναι τὸν καρπὸν ὕγρον. Οὐ μὴν ἀλλ' ὅσαι γε ὑδρεύεσθαι ζητοῦσι καθάπερ ἡ λακωνικὴ τὰ ὑφύδρα ζητοῦσιν. Ὡσαύτως δὲ καὶ τῶν ἀμπέλων αἱ μὲν στερεαὶ καὶ πυκναὶ καθάπερ καὶ πρότερον ἐλέχθη τὴν ὀρεινὴν μᾶλλον φιλοῦσιν, αἱ δὲ μαναὶ καὶ ὕγραὶ τὴν πεδεινὴν· ἐκατέραις γὰρ ἡ τροφή πρὸς τὴν φύσιν σύμμετρος ταῖς μὲν ἐλάττων οὕσα ταῖς δὲ πλείων.

[7] Ὡς δὲ τὰ ἀκρόδρυα καλὰ δοκεῖ περὶ τὰς ὑπώρειας γίνεσθαι· σημεῖα δὲ ποιοῦνται τὴν αὐτομάτην γένεσιν· ὅπου γὰρ ἡ φύσις αὐτὴ γεννᾷ τοῦτον οἰκειότατον εἶναι τόπον. Αἱ δὲ καθ' ἕκαστα διαφοραὶ δῆλον ὅτι κυριώταται, καὶ γὰρ ὑπώρειαι πολλαὶ καὶ παντοῖαι, καὶ τὸ ὅλον ὥς περ μία τις αὕτη διαφορὰ καθ' ὕψος καὶ ταπεινότητα, πολλῶν οὐσῶν ἐτέρων καὶ μειζόνων ὥς περ ἐν ταῖς ἱστορίαις εἵπομεν, ὧν οὐδεμίαν ἀθεώρητον εἶναι χρῆ.

[8] Τὴν γοῦν λειμωνίαν καὶ ἔφυδρον σχεδὸν οἱ πλείους ὁμολογοῦσιν ἀγαθὴν εἶναι ταῖς ἀμπέλαις ὥς περ τὴν λευκόγειον ἐλάαις καὶ συκαῖς· αἱ μὲν γὰρ ὑγροτέρας δέονται καὶ μαλακωτέρας τροφῆς, αἱ δὲ ξηροτέρας καὶ σωματωδεστέρας. Ὡς δ' αἰεὶ τὰ μὲν ξηρὰ ξηρὰν ζητεῖ χώραν, τὰ δὲ ὕγρά ὕγρην. Ὡς δ' ἀπλῶς εἰπεῖν ἀρίστη πᾶσιν ἡ μανὴ καὶ κούφη καὶ ἔνικμος, εὐτραφὴς γὰρ μάλιστα καὶ εὐαυξής, εἰ μὴ ὅσα διὰ τὴν ἰσχὺν λαμβάνοντα πλῆθος τροφῆς ἐξυβρίζει καθάπερ ἡ ἀμυγδαλῇ. Ταύτη γὰρ ἡ λεπτόγειος οἰκειότερα καὶ τόπος εὐδιεινὸς καὶ εὖειλος, ἐναντίως δὲ τῇ εὐβοϊκῇ παλίσκιος καὶ δροσερός.

[9] Οὐ μικρὸν δὲ οὐδὲ τὸ πρὸς τὰ πνεύματα καλῶς κεῖσθαι τοὺς τόπους ὥστε καὶ τοῦτο θεωρητέον. Εὐπνουν μὲν γὰρ ἅπαντα ζητεῖ τροφαί τε γὰρ ἐν τοῖς τοιούτοις βελτίους καὶ οἱ καρποὶ πεπειρότεροι. Πνευματώδη δὲ καὶ προσήνεμον οὐδὲν ὡς εἶπεῖν τῶν γε ἡμέρων· ἀναυξῇ γὰρ καὶ μικρὰ καὶ καυλώδη γίνεται διὰ τὰς πληγὰς τὰς ὑπὸ τῶν πνευμάτων. Ἐνια δὲ οὐδὲ τῶν ἀγρίων· οὐ γὰρ τελειοκαρπεῖ καθάπερ οὐδὲ τὴν εὐβοϊκὴν φασιν, ἀλλὰ μέχρι τοῦ ἄνθους ἀφικνεῖσθαι, τὰς δ' ἐν τοῖς ὑπηνέμοις εὐαυξεῖς τε καὶ πολυκάρπους γίνεσθαι. Τὸ γὰρ ὅλον ὥσπερ πολλάκις εἴρηται συμμετρίας τινὸς ἔοικεν ἕκαστα δεῖσθαι πρὸς τὴν φύσιν ὁμοίως ἐν τε ταῖς ἄλλαις τροφαῖς καὶ ταῖς τοῦ ἀέρος μεταβολαῖς. Ἀλλὰ τοῦτο μὲν ἂν εἴη καθόλου καὶ κοινόν.

[7.1] Τὰς δὲ μανότητας καὶ πυκνότητας τῶν φυτευομένων οὐχ οὕτω πρὸς τὸν τόπον ὡς πρὸς αὐτὰ τὰ φυτευόμενα σκεπτέον ὅσα τε φιλόσκια καὶ μὴ καὶ ὅσα μακρόρριζα καὶ βραχύρριζα· τὰ μὲν γὰρ δῆλον ὅτι μανὰ, τὰ δὲ πυκνὰ φυτευτέον. Φιλόσκια δὲ ὧν οἱ καρποὶ ξηροὶ τε καὶ πυρηνώδεις ὥσπερ ρόας καὶ μυρρίνου, καὶ ὅσα φύσει μανὰ τε καὶ ξηρὰ καὶ μὴ μακρόρριζα καθάπερ ἡ δάφνη.

[2] Τῶν μὲν γὰρ ὁ καρπὸς ἡλιούμενος στρυφνὸς γίνεται, τὰ δὲ ὥσπερ προβολῆς δεῖται καὶ πρὸς τοὺς χειμῶνας καὶ πρὸς τὰ καύματα διὰ τὴν ἀσθένειαν· οὐκ ἐνοχλεῖ γὰρ τῷ ταρρῷ διὰ τὴν βραχυρριζίαν· καίτοι τινὲς ἅπαντα κελεύουσι διὰ πολλοῦ φυτεύειν ὅπως μὴ σύνταρρα γίνηται μηδ' ἀναυξῇ τροφήν τ' ἐλάττω λαμβάνοντα καὶ τοῦ πνεύματος ἀποκλειόμενα. Οὐ μὴν ὀρθῶς γε λέγουσιν, ἀλλ' ἐκάτερα διαιρετέον ὥσπερ εἴρηται. Χρὴ δὲ καὶ πρὸς τὸν τόπον ὀρῶντα ποιεῖσθαι τὰς ἀποστάσεις· ἐν γὰρ τοῖς ὀρεινοῖς ἐλάττους ἢ ἐν τοῖς πεδεινοῖς· ἐπ' ἑλαττον γὰρ αἱ τε ρίζαι προσαυξονται καὶ ἡ κόμη.

[3] Ἄπαν δὲ φυτὸν ὅταν ἐκβλάσῃ τὸ πρῶτον ἐᾶν ρίζωθῆναι μηδὲν κινεῖν τῶν ἄνω καθάπερ ἐπὶ τῶν ἀμπέλων ποιοῦσιν ἀφιέντες τὰς ράχους, εἴθ' ὅταν ἰσχύωσιν τότε περιαιρεῖν τὰ ἄνω καταλιπόντα τὰ κάλλιστα καὶ τὰ ἐπιτηδειώτατα πεφυκότα. [Κατὰ γὰρ τὰ δένδρα τοῦτ' ἀναγκαῖον, οὐδ' ὥσπερ ἐπὶ τῶν ἄλλων ἀφαιρεῖν ἐνδέχεται πάντα καὶ τέμνειν ἰσόγεων·] ἄρριζώτου γὰρ ὄντος ἐὰν περιαιρῇ καὶ κινή τις ἀσθενὲς ὃν κινδυνεύσει μᾶλλον, ἐὰν δ' ἐρριζωμένου καὶ ἰσχύοντος αὐτό τε ἀπαθὲς ἔσται καὶ τὴν τροφήν ἀποδώσει πλείονα τοῖς καταλοιπίοις.

[4] Ἡ δὲ ἀναγωγή καὶ ἦν καλοῦσιν οἱ πολλοὶ τῶν φυτῶν παιδείαν οἷον σχηματισμός ἐστι καὶ μόρφωσις τῶν δένδρων ὕψει τε καὶ ταπεινότητι καὶ

πλάτει καὶ τοῖς ἄλλοις. Ὡς δ' ἐπὶ πᾶν ἐπιτέμνουσι τὰ ὑψηλὰ πλὴν ὅσα φύσει τοιαῦτα καὶ ἔστι καὶ βούλεται καθάπερ φοῖνιξ, πεύκη, κυπάριττος. Ἀκαρπότερα γὰρ γίνεται διὰ πολλοῦ τῆς τροφῆς ἰούσης καὶ ἐνταῦθα καταναλισκομένης, ἀλλὰ δεῖ πολύκλαδα καὶ πολυβλαστῇ ποιεῖν· ἅμα γὰρ τῇ πολυκαρπία καὶ εὐτρυγητότερα καὶ τὸ ὅλον εὐθεραπευτότερα γίνεται, δι' ὃ καὶ περιαιρετέον τὰς μὴ κατὰ καιρὸν βλαστήσεις.

[5] Σχεδὸν δ' ἡ τοιαύτη θεραπεία καὶ κατάστασις ὁμοία τῇ διακαθάρσει τυγχάνει τελείων ὄντων τῶν δένδρων· ὑπὲρ ἧς καὶ δεικτέον πρῶτον τῶν κατὰ τὰς θεραπειὰς εἶθ' οὕτω περὶ τῶν ἄλλων. Ὡσπερ γὰρ ἐφεξῆς ταῦτα τῶν περὶ τὴν φυτουργίαν ἐστί. Κοινοτάτη μὲν οὖν καὶ μάλιστα ἔνδηλος ἐπὶ τῶν ἀμπέλων τυγχάνει· πάντες γὰρ χρῶνται καὶ πάντες ἀμπελουργοῦσιν ὑπ' αὐτῆς ἀναγκαζόμενοι τῆς φύσεως διὰ τὴν εὐβλάστηαν καὶ πολυβλαστήαν· ὑπὲρ ἧς ἐπειδὴ καὶ ἐν τῇ κλάσει καὶ ἐν τοῖς ἄλλοις διηκριβῶται μάλισθ' ἡ θεραπεία πειρατέον αὐτὰ καθ' αὐτὰ θεωρεῖν ὕστερον· νῦν δ' ὑπὲρ τῶν ἄλλων λέγωμεν.

[6] Οὐδὲ γὰρ οὐδ' ἐπὶ τούτων μικρὸν ἐστί τὸ καταστήσασθαι πως τὰ δένδρα καὶ τὰ κακῶς πεφυκότα καὶ τὰ ἐμποδίζοντα τοὺς καρποὺς ἀφαιρεῖν. Ἐμποδίζει γὰρ οὐ ταῦτα μόνον ἀλλὰ καὶ τὰ ἀπηρητῆμενα καὶ αὖα ὅλως τὰ παρακαίρως πεφυκότα. Δι' ὃ δεῖ ταῦτ' ἐξαιροῦντα μετατιθέναι τὴν βλάστησιν εἰς τὸ δέον· ἔοικε γὰρ ὥστεπερ ὀχετεία τις εἶναι τῆς τροφῆς τῶν δένδρων ὅπως ἂν ἄγῃ τις· εἰς γὰρ τὰ καταλειπόμενα ρεῖ καὶ ταῦτ' αὖξει.

[7] Τοῦτο δὲ ξυμβαίνει δι' ὅτι τοῖς μέρεσιν ἄριστα πέφυκε καὶ ἔτι προσεπιβλαστάνει κατ' ἐνιαυτόν· ἐπεὶ καὶ εἴ τις αἰεὶ βούλεται κολοῦειν τὰ ἄνω πρὸς τὰς ρίζας ἢ τροφή πᾶσα φέρεται κάκειναι λαμβάνουσιν αὖξιν ὥστε συνταρροῦσθαι τὰ χωρία, καὶ τέλος ἀναυξῇ γίνεται τὰ ἄνω πάσης ἐνταῦθ' ὥρμηκυίας τῆς τροφῆς· οἷον γὰρ ἤδη φύσις γέγονε χρονισθέντων. Ἡ μὲν οὖν ἄμπελος αἰεὶ τὴν τομὴν ἐπιζητεῖ κατ' ἐνιαυτὸν διὰ τὸ εὐαυξῆς τὰ δὲ ἄλλα τὰ μὲν παρ' ἔτος τὰ δὲ διὰ τετραετίας, οὐδὲν γὰρ οὕτως εὐαυξῆς· ἐπεὶ εἴ γέ τι τοιοῦτον εἴη δέοιτ' ἄν.

[8] Ἀφαιρεῖν ἀπὸ τῶν ὑγρῶν περιέργων ἅμα δ' ἡ ἑλκωσις πόνον παρέχει καὶ κακοῖ τὰ δένδρα· δι' ὃ καὶ μετὰ τὴν διακάθαρσιν εὐθὺς οἶονται δεῖν κοπρίζειν καὶ τὴν ἄλλην ἀποδιδόναί θεραπείαν, ὅπως ἐπαναλάβωσι τῇ τροφῇ τὴν κακοπάθειαν, ἀλλὰ μόνον τό γε συνεχὲς ἐν τῇ τῶν αὐτῶν ἀφαιρέσει ποιεῖσθαι· ταῦτα γὰρ οὔτε πόνον ποιεῖ τῇ ἐλκώσει καλῶν τε προσηρητῆμενα τὰς τροφάς.

[9] Ἐν δὲ τῇ διακαθάρσει τὰ τε μὴ κάρπιμα διαιρετέον καὶ ὅσα τῶν ἐτέρων αὖξιν ἀφαιρεῖται καὶ ὅσα διαπέφυκεν, ἐν τοῖς ἔξω γὰρ δεῖ τὴν βλάστησιν

εἶναι, καὶ ἔτι τὰ πυκνὰ καὶ ἀλλήλοις ἐπιβάλλοντα καὶ ὅσα τὴν ἔκφυσιν ἐκ τῶν μέσων ἔχει· πάντα γὰρ ταῦτα καὶ τὸ πνεῦμα καὶ τὸν ἥλιον ἀφαιρεῖται. Δεῖ δὲ καὶ εὐπνουν εἶναι καὶ πρόσκειναι τὸ δένδρον δι' ὃ καὶ οὐ κακῶς οἱ οὕτω ῥυθμίζοντες ὥστε πρὸς μεσημβρίαν βλέπειν, καθάπερ οἱ τὰς συκάς καὶ τὰ ἄλλα καὶ μάλιστα τὴν ἐλάαν.

[10] Ἐπεὶ δ' ἐπίπονος ἡ διακάθαρσις διὰ τὰς πληγὰς διὰ τοῦτ' οὐ τὴν τυχοῦσαν ὥραν ἀλλὰ (τὴν) μετὰ πλειάδα ληπτέον· ἰσχυρότατα γὰρ τότε καὶ μάλιστα αὐτῶν τὰ δένδρα καταναλωκότα τὸ ὕγρον εἰς τοὺς καρποὺς ἕτερον δὲ οὐδέπω δεδεγμένα. Τὰ δ' ὀψικαρπότερα δηλὸν ὅτι κατὰ λόγον μετὰ τὴν τῶν καρπῶν ἀφαίρεσιν. Ἴδιον δ' ἐπὶ τῆς συκῆς· μόνη γὰρ διακαθαίρεται μικρὸν πρὸ τῆς βλαστήσεως· αἴτιον δ' ὅτι τότε μάλιστα εὐσύμφυτος· δεῖ δὲ τοῦτο σπεύδειν, ἀσθενὲς γὰρ ὃν καὶ μανὸν πονεῖ μάλιστα διὰ τοῦ μετοπώρου καὶ περὶ πλειάδα ξηροτέρας οὔσης τῆς ὥρας οὐ δυναμένη συμφῦναι σήπεται τε παραρρέοντος τοῦ ὕδατος καὶ ὑπὸ τῶν χειμῶνων κακοπαθεῖ καὶ τὸ ὅλον διαφθείρεται. Τοῦτο μὲν οὖν ἴδιον τῶν ἀσθενῶν καὶ μανῶν.

[11] Οὐκ ἴση δὲ πάντων ἡ ἀφαίρεσις ἀλλὰ πλείων τῶν μᾶλλον δεομένων. Δεῖται δὲ τὰ εὐβλαστοῦντα πολλῆς γινομένης οἶον ἐλάα δοκεῖ καὶ ῥόα καὶ μύρρινος· ὅσῳ γὰρ ἂν τις ἐλάττω τούτοις καταλίπη βέλτιον βλαστάνει καὶ τοὺς καρποὺς φέρει βέλτιον· τοῦτο δ' ὅτι πυκνόβλαστα καὶ λεπτόβλαστα ἔστι καὶ ταχὺ παραναϊνόμενα δι' ὃ καὶ φρυγανικώτατα πάντων τῇ προσόψει.

[12] Χρὴ δ' ἐλάττονος ὅσα πρὸς τὰς τομὰς ἀσθενῆ καθάπερ ἄπιος καὶ μηλέα καὶ εἴ τι ἄλλο ξηρὸν καὶ λεπτόφλοιον, καὶ γὰρ ταῦτα πονεῖ· δι' ὃ καὶ τὰ αὖτα τούτων ἢ ταῖς χερσὶν ἀφαιρεῖν ὥσπερ ἐλέχθη τινὲς κελεύουσιν ἢ τοῖς σιδήροις ὡς ἐλαφρότατα· κίνδυνος γὰρ ἅμα τῷ πόνῳ διὰ τὴν ἔλκωσιν. Ὡς περ γὰρ καὶ τῶν ῥιζῶν ἐν τῇ σκαπάνῃ τιτρωσκομένων χεῖρῳ γίνεται, πολλάκις δὲ καὶ νοσεῖ καὶ ἀφαινεῖται, τὸν αὐτὸν τρόπον οἶσθαι χρὴ καὶ ἀπὸ τῶν ἄνωθεν ἐν τοῖς μὴ δυναμένοις φέρειν. Καὶ περὶ μὲν καθάρσεως ἀρκεῖται τὰ εἰρημένα.

[13.1] Ῥιζοτομεῖται δὲ μετὰ τὴν φυτεῖαν καὶ ὅταν ἦ νέα πάνθ' ὡς εἰπεῖν ὅπως τε κατὰ βάθους ὠθῶνται καὶ πλείω λαμβάνωσιν αὐξησιν, μάλιστα δ' ὢν ἐπιπολῆς αἱ ῥίζαι καθάπερ ἐλάα καὶ ἄμπελος. Ὅταν δὲ πρεσβύτερα γένηται τὰς μὲν ἐπετεῖους καὶ ὅλως τὰς ἐπιπολῆς ἀφαιρετέον ὅπως αἱ κάτω πλείους καὶ ἰσχυρότεραι γίνωνται· φθείρουσι γὰρ ἐκεῖναι ταύτας καὶ ἐμποδίζουσιν, αὐταὶ δ' οὐ δύνανται παρέχειν τροφήν ἀλλὰ καὶ πονοῦσι καὶ ὑπὸ τοῦ ἡλίου καὶ ὑπὸ τοῦ ψύχους. Ἀφαιρετέον δὲ καὶ τὰς αὖας· προσηρτημένα γὰρ καὶ ἄλλως λυμαίνονται καὶ σκώληκας ἐμποιοῦσι τοῖς δένδροις.

[2] Τὰς δὲ ἄλλας οὐ κινητέον· οὐδὲ γὰρ τὴν διακάθαρσιν ἔστιν ὥσπερ τῶν ἄνω ποιεῖσθαι· καὶ γὰρ τὸ γυμνοῦν ἐπὶ πλεόν χαλεπὸν καὶ ὅλως οὐκ εὐσημον ὄθεν ἀφαιρετέον. Ἄμα δὲ καὶ ὀποθενοῦν φυομένη μόνον δὲ ἰσχύουσα τὴν τροφήν ἀποδώσει, κάλλιον δ' ἐὰν πανταχόθεν· τὸ δὲ δὴ μῆκος καὶ πλάτος ὅσῳ ἂν ἦ πλεόν ὠφελιμώτερον ὥστε τὰ πρὸς τὴν βλάστησιν καὶ τὴν εὐτροφίαν μόνον δεῖ παρασκευάζειν.

[3] Περί δὲ ἀρδεύσεως καὶ ὑδάτων σχεδὸν εἴρηται πρότερον. Ὅσα γὰρ ἐν τοῖς οὐρανίοις ὠφέλιμα κατὰ ποίας ὥρας ἢ ἔτους ἢ νύκτωρ ἢ μεθ' ἡμέραν δῆλον ὅτι καὶ ἐν τοῖς ἐπιρρύτοις καὶ ὀχετευομένοις ὁμοίως ἔσται. Τοῦ δὲ θέρους εὐλόγως μάλιστα χρῶνται διὰ τὴν σπάνιν τῶν ἐκ διὸς καὶ ἅμα πρὸς τὴν ἐκτροφὴν τῶν καρπῶν ἀναγκαῖον. Οἱ δὲ καὶ οἶονται τότε μάλιστα δεῖσθαι πλείστης ἀφαιρέσεως καὶ κυριωτάτης γινομένης.

[4] Ἰσχυρὸν δ' ὥσπερ ἐν τοῖς ἄλλοις καὶ ἐν τούτοις τὸ ἔθος, οἷον γὰρ φύσις γίνεται. Δι' ὃ καὶ τὰ ἐν τοῖς ξηροῖς καὶ ἀνύδροις οὐδὲν ζητεῖ πλὴν τὸ ἀναγκαῖον καὶ χεῖρω γίνεται βρεχόμενα καθάπερ τὰ εἰωθότα μὴ βρέχεσθαι. Καὶ κίνδυνος δὲ ἐὰν μὴ συνεχῶς ἀποδιδῷ βρέχειν ἀρξάμενος. Ἐκείνην τε γὰρ ἀφαιρεῖται τὴν ἰσχὴν καὶ [τὴν] τροφήν [καὶ] ἑτέραν οὐ διδοὺς ἀμφοτέρων παραιρέσει ἀμαρτάνει, ὥστε πολλάκις ὑπὸ τῶν καυμάτων αὐαίνεται. Σχεδὸν δὲ οἱ καρποὶ χεῖρους τῶν γε πλείστον βρεχομένων, ἐὰν δὲ σύμμετρον λάβῃ πλείους καὶ πολλῷ καλλίους.

[9.1] Περί δὲ κοπρίσεως ἀκολουθῶς δῆλον ὅτι τῇ διακαθάρσει λεκτέον τοὺς χρόνους ἄλλως τε εἰ καὶ μετ' ἐκείνην εὐθὺς κοπρίζειν δεῖ· ἅμα δὲ καὶ οὐδ' ἂν δύναιντο δέχεσθαι συνεχῶς ἄλλ' ἀφαιρῶνται διὰ τὴν θερμότητα. Τὸ γὰρ τὴν ψιλὴν κοπρίζειν οὐχ ὅμοιον· ἐν ἐκείνῃ μὲν γὰρ εἰς πολλὰ μερίζεται καὶ ἐξαναλίσκεται τὰ δεχόμενα τῶν σπερμάτων, ἐνταῦθα δὲ εἰς αὐτὰς τὰς ρίζας δύεται καὶ οὐ δύναται πᾶν διαδιδόναι τοῖς καρποῖς οὐχ ὁμοίως εὐτροφον (ὄν) οὐδὲ πολὺχουν, ὥστε πάλιν ἄλλης καὶ ἄλλης ἐπιγινομένης ὡς ἐκθερμαίνόμενον αὐαίνεται.

[2] Ἐπεὶ καὶ ὁ σῖτος, ἂν τις κατακόρως χρῆται καὶ [μὴ] ἐπιγίνηται πλῆθος ὑδατος· δι' ὃ καὶ ταῖς ἐπομβρίαις χρησιμώτερος ὁ γε συνεχῆς καὶ πλείων κοπρισμὸς, ἐν δὲ ταῖς αὐχμώδεσι καὶ λεπταῖς ὁ σύμμετρος. Διὰ ταῦτα δὲ ἴσως οὐδὲ ἡ δριμυτάτη τοῖς δένδροις ἀρμόττει. Καίτοι δόξειεν ἂν ἄτοπον εἶναι τὸ μὴ τοῖς ἰσχυροτάτοις τὴν ἰσχυροτάτην· ἄλλ' ἐν τῷ προειρημένῳ τὸ αἴτιον ληπτέον. Ἐπεὶ καὶ τοῖς λαχάνοις διὰ τοῦθ' ἀρμόττει μεθ' ὑδρείας ἢ χύλωσις καὶ ὅλως ὅτι πολλῷ τῷ ὑγρῷ χρῶνται καὶ καθ' ἡμέραν καὶ αὐτὰ φύσει ὑγρά·

φυλλοφορεῖν γὰρ ἐθέλουσιν οὐ καρπογονεῖν αὐτά.

[3] Οὐ μὴν ἄλλ' ἐνίαις γε χρῶνται καὶ πρὸς τὰ δένδρα τῶν ἰσχυροτέρων καὶ μάλιστα εἰς μαλακότητα καὶ μεταβολὴν τῶν καρπῶν, οἷον ὑεῖα πρὸς τὸ γλυκαίνειν καὶ ἀπυρήνους ποιεῖν τὰς ρόας καὶ τὰς ἀμυγδαλᾶς ἐκ πικρῶν γλυκείας καὶ ὥς παρὰ τοὺς μυρρίνους κελεύουσιν ἰσχυροτέραν ἔτι παραβάλλειν οἷον τὴν βυρσοδεψικὴν καὶ οὖρον παραχεῖν ὅταν ἐκβλαστήσωσιν ὥς ἂν ἀπυρήνων γινομένων· οἱ δὲ καὶ ἐλάα συμφέρειν οἷονται πρὸς εὐκαρπίαν.

[4] Ἔοικε δὲ καὶ τὸ ἐν τῇ ἀρχῇ μέγα διαφέρειν, εἴ γε καὶ τὰ τῶν σικύων σπέρματα γάλακτι βρεχόμενα καὶ μελικράτῳ γλυκυτέρους ποιεῖ. Νομίσειε δ' ἂν τις ταῦτα καὶ ἐπὶ τῶν ἄλλων γίνεσθαι λαχάνων, ἄλλ' ἴσως τὸ δριμύ χρησιμώτερον. Ἡ δὲ ρίζα τῶν δένδρων ἀρχὴ τις οὖσα καὶ τὰ περικάρπια συνεξομοιοῖ τὰ ἐφ' ἑαυτῆς. Περὶ μὲν οὖν τούτων καὶ πρότερον εἴρηται. Τὴν δὲ χρησίμην αἰεὶ πρὸς τὰς δυνάμεις ἀποδοτέον τῆς μὲν δριμυτέρας ἐλάττονα τῆς δὲ μαλακώτερας πλείονα.

[5] Δεῖ δὲ καὶ τὴν πρόσφορον ἐκάστοις τῶν δένδρων μὴ ἀγνοεῖν· οὐ γὰρ ὥσπερ ὕδωρ τὸ αὐτὸ πᾶσιν οὕτω καὶ κόπρος, ἄλλ' ὥσπερ τὰ ἐδάφη πρὸς ἕκαστον οἰκεῖα οὕτω καὶ ἡ κόπρος. Ἐπεὶ καὶ κατὰ τὰς ἡλικίας τῶν δένδρων ἐστὶ τις διαφορὰ· δι' ὃ καὶ φυτεύοντες ὑποβάλλουσιν εὐθὺς ὥσπερ ἐλέχθη τὴν τῶν λοφούρων ὅτι κουφοτάτη, τὸ δ' ἀσθενὲς κουφοτάτης δεῖται. Τὸ δ' ὅλον ἐν ταῖς θεραπείαις τῶν δένδρων ὅσα μὲν κοινὰ πᾶσίν ἐστι ταῦτα τῷ ποσῷ καὶ τῷ ποιῷ διοίσει καὶ τοῖς καιροῖς οἷον τομῇ, διακάθαρσις, σκαπάνη, κόπρισις. Ταῖς δ' οὖν ἀμπέλαις ἢ διὰ τεττάρων ἢ πλείονων ἐτῶν παραβάλλουσι κόπρον· οὐ γὰρ δύνανται φέρειν δι' ἐλαττόνων οὐδ' ἔστι βοήθεια καθάπερ τοῖς δένδροις ἢ ὕδρευσις, ἄλλ' ἐκκαίονται. Δι' ὃ καθάπερ ἐλέχθη ταῖς ἐπομβρίαις χώραις συμφέρει μᾶλλον· ἄλλως γὰρ κίνδυνος μὴ ἐπιγινόμενων τῶν ἐκ διός.

[10.1] Σκαπάνη δὲ πᾶσι συμφέρει· τὰ τε γὰρ ἐμποδίζοντα καὶ τὰ παραιρούμενα τὰς τροφὰς ἐξαίρει καὶ αὐτὴν τὴν γῆν ἐνικμοτέραν ποιεῖ καὶ κουφοτέραν· ἔτι δ' ὁ ἀὴρ ἐγκαταμινύμενος, ἀνάγκη γὰρ ἐγκαταμίγνυσθαι κινουμένης, ἱκμάδα τέ τινα δίδωσι καὶ παρέχει τροφήν. Δι' ὃ καὶ τὴν αὐχμώδη καὶ ἄνδρον σκάπτειν δεῖ καὶ μεταβάλλειν πολλάκις ὥσπερ καὶ πρότερον εἴρηται. Συμφέρει δ' ἡ σκαπάνη καὶ τοῖς ἐλώδεσι καὶ τοῖς ἐφύδροις. Καίτοι δόξειεν ἂν ἄτοπον εἰ τοῖς ἐναντίοις· ἄλλ' οὐδὲν ἄτοπον, τὴν μὲν γὰρ ξηραίνει τὴν δ' ὑγραίνει, δεῖται δ' ἐκάτερα τοῦ ἐναντίου.

[2] Τροφῆς δὲ πλείονος καὶ βελτίονος γινομένης αὐτὸ τὸ δένδρον εὐθενεῖ

καὶ οἱ καρποὶ καλλίους· ποιεῖ γὰρ καὶ τοὺς πυρῆνας ἐλάττους καὶ ὅσων
ξυλώδη καὶ δερματικά τὰ ἐκτὸς οἶον ἀμυγδαλῆς, καρύας εὐβοϊκῆς, τούτων
λεπτότερα ταῦτα τὰ δ' ἐντὸς μείζω. Τὸ γὰρ ὅλον ἢ εὐτροφία διυγραίνει καὶ τὸ
σαρκῶδες αὐξει. Διὰ ταῦτα καὶ κατὰ λόγον ἀμφοῖν τὸ συμβαῖνον. Ποιεῖ δὲ
καὶ εὐχυλότερα καὶ μείζω καὶ ἡδίων μετὰ τῆς ἄλλης θεραπείας, ὅτι καὶ τροφή
πλείων καὶ πέψις γίνεται μᾶλλον. Ἐπὶ δὲ τοῦ κράνου, περὶ τούτου γὰρ
μάλιστα ἀντιλέγεται, δηλὸν εἶπερ ὡς ἀληθῶς πλείον ἀναλαμβάνει τῆς
συμμέτρου τροφῆς, ὡς ἦττον ποιεῖ εὐχυλον. Ὅπερ καὶ ἔπ' ἄλλων συμβαίνει
περικαρπίων ἐν ταῖς πειραῖς λίαν χώραις καὶ εὐτρόφοις.

[3] Ἡ μὲν οὖν σκαπάνη πάντα ταῦτα συναπεργάζεται καὶ τὸ ὅλον ὠφελεῖ
διὰ τὸ ἐξαιρεῖν τὰ παραιρούμενα· ἐπεὶ καὶ τὰ παραφυτευόμενα καὶ τὰ
παρασπειρόμενα διὰ τοῦτο βλάπτει πάντα τὰ δὲ καὶ ὅλως ἀναιρεῖ πλὴν ὅσα γ'
ἐν φαρμάκου μέρει· λέγω δ' ὡς οἱ τὰς κριθὰς ἐπισπείροντες τοῖς τῶν ἀμπέλων
φυτοῖς ἢ εἴ τι ἄλλο ξηρὸν ὅπως τῆς ὑγρότητος (τὸ πλῆθος) ἀφαιρεθῇ, καὶ ὡς
ταῖς ῥαφανίσιν τοὺς ὀρόβους πρὸς τὸ μὴ κατεσθῆσθαι καὶ εἰ δὴ τι ἄλλο
τιοῦτον·

[4] καὶ ὅσα προσφιλῇ τυγχάνει καθάπερ δοκεῖ τῶν δένδρων ἐλάα καὶ
μύρρινος· τὰς τε γὰρ ρίζας συμπλέκεσθαι φησι τῶν δένδρων Ἀνδροτίων καὶ
τὰς τοῦ μυρρίνου ῥάβδους φύεσθαι διὰ τῶν ἀκρεμόνων τῆς ἐλάας, τὸν τε
καρπὸν ἔχοντα τοῦ ἡλίου καὶ τῶν ἀνέμων προβολὴν τὴν ἐλάαν ἀπαλὸν
γίνεσθαι καὶ γλυκύν, ἐλάττω δὲ τοῦ ἐν τοῖς προσείλοις. Ἄλλο δ' οὐδὲν ἐθέλει
φυτεύεσθαι πρὸς ταῖς ἐλάαις.

[5] Εὐμένες δὲ καὶ ἡ πεύκη δοκεῖ πᾶσιν εἶναι διὰ τε τὸ μονόρριζος εἶναι καὶ
βαθύρριζος· ὑποφυτεύεται γὰρ ὑπ' αὐτῇ καὶ μύρρινος καὶ δάφνη καὶ ἕτερα
πλείω αὐξήσιν λαμβάνει. Καὶ φανερόν ὅτι μᾶλλον παροχλοῦσιν αἱ ρίζαι τῆς
σκιᾶς· σκιὰν γὰρ πολλὴν ποιεῖ ἡ πεύκη. Κατὰ λόγον δὲ καὶ τὰ ἄλλα τὰ
ὀλιγόρριζα καὶ βαθύρριζα καὶ πρὸς τούτοις ὧν μὴ κατὰ τὴν αὐτὴν ὥραν ἢ
βλάστησις καὶ καρποτοκία·

[6] τροφὴν τε γὰρ ἐλαχίστην παραιρεῖται ταῦτα καὶ παραλλάττοντες οἱ
χρόνοι τῇ τε βλαστῇ καὶ τῇ τελειώσει τῶν καρπῶν ἦττον λυποῦσι.
Χαλεπώτατα δὲ καὶ ἀμπέλῳ καὶ τοῖς ἄλλοις συκῇ καὶ ἐλάᾳ· καὶ γὰρ τροφὴν
πολλὴν ἀμφοτέρα λαμβάνει καὶ σκιὰν παρέχει πλείστην· χαλεπὸν δὲ καὶ ἡ
ἀμυγδαλὴ διὰ τε τὴν ἰσχὺν καὶ διὰ τὴν πολυρριζίαν. Καίτοι φυτεύουσιν τινες ἐν
ταῖς ἀμπέλοις ὡς ἀσινέστατον τροφῆς τε ἐλαφρᾶς δεομένην καὶ ἅμα διὰ τὸ
πρωΐκαρπον καὶ μὴ παλίσκιον ἥκιστα ἐνοχλοῦσαν· οὐ μὴν ὀρθῶς κελεύουσιν.

[7] Οὐ γὰρ οὕτως ἡ σκιά λυπεῖ καθάπερ εἴρηται καὶ τὸ ὄψιον ὡς ἡ ἰσχὺς τῶν ῥιζῶν· ἀφαιρεῖται γὰρ τὴν τροφὴν συντάρρων γινομένων. Ἀλλὰ κουφότατον καὶ ἀσινέστατον πάντων ἐστὶ μῆλέα καὶ ῥόα· καὶ γὰρ οὐ πολύρριζα καὶ τροφῆς ἐλαφρᾶς δεῖται καὶ ταχὺ γηράσκουσιν ὥστε μὴ πολὺν χρόνον ἐνοχλεῖν. Ἀπλῶς δ' ἅπαντα ἐπισινη καὶ βλάβπει τῇ παραφύσει.

[8] Καίτοι συμβαίνει γ' ἐνίοτε τῶν παραφύτων παραιρουμένου θατέρου καὶ θάτερον αὐαίνεσθαι· τοῦτο γὰρ ἤδη τινὶ συνέπεσεν ἅμα πεφυκυῶν ἀναδενδράδων καὶ συκῶν ὡς αἱ συκαὶ παρηρέθησαν· αἴτιον δ' ὅτι μεγάλην ἐποίησε μεταβολὴν συνηυξημένων ἤδη καὶ συντεθραμμένων· ὥστε γὰρ μία φύσις ἐγεγένητο διὰ τὸν χρόνον. Ἐπεὶ νέων ὄντων εἴ τις παρεῖλεν οὐχ ὅτι ἂν ἀφάανεν ἀλλὰ καὶ εὐαυξεστέρας καὶ καλλίους ἐποίησε. Καὶ περὶ μὲν τῶν ἄλλων δένδρων ἐκ τούτων θεωρεῖσθω.

[11.1] Περὶ δὲ ἀμπέλων ὅσα μὴ κοινὰ καὶ ἐν τοῖς πρότερον εἴρηται λεκτέον ὁμοίως. Ἐπεὶ δὲ καὶ τὰ γένη διαφέρει καὶ αἱ χώραι τοῦτο χρὴ πειραῖσθαι διαιρεῖν τὰ ποῖα ταῖς ποίαις οἰκεῖα. Κατὰ φύσιν μὲν γὰρ ἐὰν φυτεύῃ τις ἀγαθὰ, παρὰ φύσιν δὲ ἄκαρπα γίνεται. Τὸ δὲ κατὰ φύσιν σχεδὸν καθ' ὁμοιότητά τινα λαμβάνουσιν ὥστε εἵπομεν, ἐν μὲν τῇ στερεᾷ καὶ αὐχμῶδει τὰ στερεὰ καὶ τὰ τῶν λευκῶν καὶ τῶν μελάνων, ὡς δ' ἐπὶ τὸ πᾶν τὰ μέλανα στερεώτερα, ἐν δὲ τῇ ἐπόμβρῳ τὰ μανά. Διάδηλα δὲ τὰ πυκνὰ καὶ τὰ μανά ταῖς μήτραις ἃς δεῖ θεωρεῖν ἀποτέμνοντας τὰ νέα τῶν κλημάτων· ἔχει γὰρ ἡ μὲν μανὴ πολλὴν τὸ δὲ ξύλον λεπτὸν, ἡ δὲ πυκνὴ μικρὰν τὸ δὲ ξύλον παχύ.

[2] Ὅτι δὲ ἐκάτερον ἐκατέρῃ τῇ χώρᾳ συμφέρει, διὰ τῶνδε φανερόν· ὧν μὲν γὰρ ἡ μήτρα μεγάλη τούτων καὶ οἱ πόροι πολλοὶ καὶ εὐρέες, ὧν δὲ μικρὰ στενοὶ τε καὶ ὀλίγοι· δι' ὃ καὶ διὰ τοῦ ἔαρος τροφῆς ἐλάττονος δεῖται τὰ πυκνὰ καὶ ἅμα διατηρεῖν δύναται τὸ ὑγρὸν εἰς τὸ θέρος· ὁ γὰρ ἥλιος οὐχ ὁμοίως ἐξάγει διὰ τὴν πυκνότητα, δι' ὃ μικρᾶς τῆς ἀφαιρέσεως γινομένης ἐπαρκοῦσιν αἱ ῥίζαι τὸ σύμμετρον εἰς τὸν καρπὸν· αἱ δὲ μαναὶ πολλῆς μὲν τῆς ἀφαιρέσεως οὔσης ὀλίγης δὲ τῆς ἐπιρροῆς διὰ τὴν ξηρότητα τῆς γῆς τὰ τε κλήματα ἀσθενῇ καὶ τοὺς καρποὺς ἀτελεῖς φέρουσι.

[3] Τῇ δὲ ἐπόμβρῳ προσφορώτατον τὸ γένος ἅτε πολλῆς τροφῆς δεόμενον καὶ μεγάλης ἀφαιρέσεως γινομένης, ὁ ἥλιος ἐξάγει γὰρ, τοσοῦτῳ μᾶλλον ἐπιδίδωσι καὶ εἰς μέγεθος καὶ εἰς εὐκαρπίαν ἄφθονον μὲν τροφὴν ἔχουσα ταύτης τε κατακρατοῦσα καὶ πέττουσα ῥαδίως. Διὰ τοῦτο γὰρ καὶ ἡ λειμωνία δοκεῖ ταῖς ἀμπέλαις εἶναι [καὶ] κρατίστη δι' ὅτι πρὸς τῷ κούφῳ καὶ μὴ πίειρα εἶναι καὶ ἔφυδρός ἐστιν ὥστε μὴ δύνασθαι τὸ οὐράνιον ὕδωρ διϊκνεῖσθαι πρὸς

τὸ ἐκ τῆς γῆς.

[4] Ἡ δὲ ἄμπελος ὕδατος πλείστον δεῖται διὰ τὸ καὶ ἐν τῷ καρπῷ πλείστον ἔχειν τὸ ὑγρὸν, ἔτι δὲ μάλιστ' ἀντέχειν δύναται ἐν ταῖς ἐπομβρίαις. Ἐὰν δὲ ἡ χώρα μήτε αὐχμηρὰ μήτε ἐπομβρὸς ἀλλὰ μέση τυγχάνῃ τὰ ἀνὰ μέσον φυτεύειν ὅσα μήτε πυκνὰ μήτε μανά. Γένη μὲν οὖν πρὸς ἐκάστην ταῦτα οἰκεῖα διαιρεῖται.

[5] Περὶ δὲ τῶν σπερμάτων ἐπεὶπερ ἰσχυρότατα δεῖ διὰ τοῦτό τινες κελεύουσιν ὥς ἐκ ψυχροτάτης χώρας λαμβάνειν· πυκνότατα γὰρ ὄντα μᾶλλον ἀντέχειν ὥστε καὶ ἐν ταῖς λεπταῖς ἀντιλαμβάνεσθαι καὶ ἐν ταῖς ἐπομβρίαις μὴ ἐκσῆπεςθαι. Διὰ τοῦτο γὰρ καὶ τὰ μοσχεύματα δεῖν ἐς τὰς ἐπομβρίους μᾶλλον ἐμβάλλειν ἢ τὰ φυτεύματα πάντων τῶν δένδρων, ὅτι τὰς ρίζας τὰς καθιεμένας τῶν φυτευμάτων ἀσθενεῖς οὔσας ἐκσῆπει, τὰ δὲ τῶν μεμοσχευμένων ἰσχυρότερα καὶ εὐθὺς ἀντιλαμβάνεται.

[6] Τὰ δὲ πάχη τῶν φυτῶν εἰς μὲν τὴν ἐπομβρον οἰκεῖα· δεῖ γὰρ ὅτι μάλιστα ἰσχυρὰ καθάπερ λέγομεν· εἰς δὲ τὴν αὐχμηρὰν μήτε παχέα μήτε ἄγαν λεπτά· τὰ μὲν γὰρ οὐκ ἂν δύναιντο σῆψαι τὰ δὲ ἀσθενῇ κίνδυνος μὴ πρὸ τῆς βλαστήσεως ἀποξηρανθῇ. Παραλλάττουσι δὲ καὶ οἱ χρόνοι τῆς φυτείας καθ' ἐκάτερον· τὴν μὲν γὰρ ἐπομβρον καὶ ψυχρὰν ὀλίγον πρὸ ἰσημερίας δεῖ, τότε γὰρ ξηροτάτη καὶ θερμοτάτη· τὴν δ' αὐχμηρὰν καὶ θερμὴν μεθ' ἡλίου τροπάς· ὅσῳ γὰρ ἂν μᾶλλον βρέχεται τοσοῦτ'ω βελτίων ἢ βλάστησις· τὴν δ' ἄλλην ἅπασαν τεκμαιρόμενον πρὸς τοῦτο τὸν χρόνον.

[12.1] Χρὴ δὲ καὶ τὴν ἐργασίαν ποιεῖσθαι πρὸς τὴν χώραν εὐθὺς ἀπ' αὐτῶν τῶν γύρων ἀρξαμένους· οἷον ἐν τῇ ἐπόμενῳ μήτε μεγάλους ὀρύττοντας μήτε βαθεῖς ὅπως μὴ πολὺ συνιστάμενον ἐκσῆπη τὸ ὕδωρ· διὰ τοῦτο γὰρ ἐὰν σφόδρα κάτομβρος ᾖ τοῖς παττάλοις τοῖς σιδηροῖς φυτεύουσι. Μηδὲ δὴ συσκάπτειν αὐτοετεί μηδὲ τῷ ὕστερον ὅπως μάλισθ' ὁ ἥλιος ξηραίνῃ τὴν κατὰ τὸ φυτὸν γῆν· ἐὰν δὲ αὐχμηρὰ καὶ ξηρὰ δῆλον ὥς ἐναντίως. Οὐ γὰρ γύρους ἀλλὰ πᾶσαν εἰ δυνατόν ὀρυκτέον ἵν' ὥς μάλιστα συνεργασθεῖσα δέχεται τὸ ὕδωρ. Εἰ δὲ μὴ τάφρους ὥς βαθυτάτας καὶ μεγίστας ποιοῦντα συσκάπτειν ὅτι μάλιστα πρὸς αὐτὸ τὸ φυτὸν ὅπως ἥκιστα διαθερμαίνεται τοῦ θέρους.

[2] Ὅμοιως δὲ καὶ τᾶλλα τὰ τούτοις ἀκόλουθα ποιεῖν. Ὡς γὰρ ἀπλῶς εἰπεῖν ἀληθὲς τὸ καὶ πρότερον λεχθὲν ὅτι δεῖ ταῖς ἐργασίαις τὴν μὲν ὑγρὰν ξηραίνειν τὴν δὲ ξηρὰν ὑγραίνειν· δι' ὃ καὶ τοῦ ἔαρος κελεύουσιν ὥς βαθύτατα σκάπτειν ὅπως ὅτι πλείστον ἐγκαταμιχθὲν πνεῦμα παράσχη τροφήν. Ὡσπερ

γὰρ εἴρηται πολλάκις οὐκ ἀπὸ τῆς γῆς μόνον ἀλλὰ καὶ ἀπὸ τοῦ ἡλίου καὶ ἀπὸ τοῦ ἀέρος ἡ τροφή.

[3] Λαμβάνουσι δὲ καὶ κατὰ τὰς ὀρεινὰς καὶ ἀνεμώδεις τὰ πρόσφορα ταῖς φυτεῖαις, οἷον τοὺς τε γύρους ὀρύττοντες τοῖς καθεστῶσι πνεύμασι καὶ τὸ φυτὸν τιθέντες τὸν αὐτὸν τρόπον ὅπως ἡ βλάστησις μὴ ἐναντία γίνηται τῷ πνεύματι, θραύεσθαι γὰρ ἐκείνως ἀνάγκη, μὴδ' ἔμπαλιν ὑπερπεσοῦσα παρὰ φύσιν αὖξεται· τούτων γάρ τι πάσχουσα χείρων ἢ ἄμπελος. Ὡσαύτως δὲ καὶ τὰ ἄλλα τὰ ἀκόλουθα πρὸς τὴν χώραν. Τὰς μὲν οὖν φυτείας οὕτω καὶ διὰ ταῦτα ποιοῦνται.

[13.1] Τὰς δὲ τομὰς πανταχοῦ τῶν φυτῶν βραχείας ὥς αἱ ρίζαι σωθῶσι καὶ αὖξηθῶσι· ἅμα δὲ ἡ γῆ αὐχμηρὰ καὶ τρέφειν ἀδύνατος τὰ πολλά. Κατὰ δὲ τὴν ὀρεινὴν καὶ ψυχρὰν ἢ καὶ ὅλως ἑναυρον κατὰ τὸ ἔαρ τέμνειν εὐλαβοῦνται, τὸ γὰρ ψύχος ἀποξηραίνει. Ὡραν δὲ τῆς τομῆς σχεδὸν τὴν αὐτὴν πᾶσιν ἀποδιδόασιν ὑπ' αὐτὴν τὴν βλάστησιν ὅπως τὸ φυτὸν πληρὲς ὄν τοῦ ὑγροῦ πρὸς τὴν ἀφαίρεσιν ὀρμήσῃ καὶ ὁ βλαστὸς ὅτι κάλλιστος γένηται·

[2] τὴν γὰρ τομὴν ταύτην οὐ καρποῦ χάριν ἀλλὰ βλαστοῦ γίνεσθαι, τὴν δὲ μετοπωρινὴν καρποῦ δι' ὅπερ ἐκείνην ποιητέον εὐθὺς μετὰ πλειάδος δύσιν· τοτὲ γὰρ εἶναι συνεστηκότα τε μάλιστα καὶ ἥκιστα τεμνόμενα δακρυρροεῖν καὶ ῥήγνυσθαι. Μεθ' ἡλίου δὲ τροπὰς καὶ μετὰ ζεφύρου πνοὰς ἀμφότερα πάσχειν ταῦτα τεμνόμενα καὶ τό τε φυτὸν πονεῖν καὶ τὸν βλαστὸν ἐξ ἄκρου φύεσθαι πρὸς τῇ τομῇ διὰ τὸ τὴν τροφήν τὴν μὲν ἐξερρυηκέναι τὴν δ' ἐν τοῖς ἄκροις καταλελειφθαι.

[3] Τέμνειν δὲ τὰ μὲν ἐν τῇ χέρσῳ φυτευόμενα τῷ τρίτῳ ἔτει· θᾶττον γὰρ παραγίνεσθαι διὰ τὸ νεοργοτάτην εἶναι τὴν γῆν καὶ ἀκάρπωτον. Τὰ δ' ἐν τῇ γεωργουμένῃ ὀψιαίτερον. Τὴν δ' ἄμπελον ἄγειν δεῖ κύκλῳ περὶ τὸν πυθμένα· πανταχόθεν γὰρ ὁμαλοῦς οὗσης καλλίων καὶ εὐκαρποτέρα· τοῦτο δ' οὐ χαλεπὸν ἐάν τις καταλίπῃ μὴ τὰ κάλλισθ' ὥρμηκότα τῶν κλημάτων ἀλλὰ τὰ ἄριστα πεφυκότα πρὸς τὴν ἀγωγήν· ἀρκεῖ γὰρ εἶς ὀφθαλμὸς λειφθεὶς εἰς τὸ δέον.

[4] Ἐὰν δέ τις ἀπορῇ καὶ τοῦτο διὰ τὸ τὴν ἄμπελον μὴ ὥρμηκέναι κατὰ τὸ αὐτὸ τῶν λειφθέντων κλημάτων ἀφελεῖν τοὺς ἐντὸς ὀφθαλμοὺς ὅπως εἰς τοὺς ἔξω ρέουσα ἡ τροφή σχίσῃ τὴν ἄμπελον· ἀεὶ γὰρ πρὸς τὸ ζῶν καὶ τὸ δεχόμενον ἢ ἐπιρροή, δι' ὃ καθάπερ ἐλέχθη ῥάδιον ποιεῖν τὰς ἀγωγὰς. Τοῦτο δ' ἐν ταῖς ἐνίκμοις καὶ ἀγαθαῖς· ἐν δὲ ταῖς αὐχμώδεσι καὶ ξηραῖς ἀνάγκη τὰ βέλτιστα λείπειν· ξηρὰ γὰρ οὕσα καὶ ὀλιγοτρόφος οὐ ῥαδίως ἕτερα

προήσεται, δι' ὃ συνακολουθητέον τῇ ὁρμῇ· χρῆ δὲ καὶ πρὸς τὰ πνεύματα τῇ αὐτῇ τομῇ χρῆσθαι καὶ μὴ βιάζεσθαι παρὰ φύσιν. Τῶν μὲν οὖν φυτῶν τοιαύτας καὶ διὰ ταῦτα ποιοῦνται τὰς θεραπείας.

[14.1] Τῶν δ' ἀμπέλων τῶν τελέων ἤδη πρῶτον καὶ μέγιστόν ἐστιν ἡ κλάσις· καλῶς γὰρ ἀμπελουργουμένη καὶ εὐβλαστοτέρα καὶ εὐκαρπότερα καὶ πολυχρονιωτέρα γίνεται. Δεύτερον δὲ καὶ τρόπον τινὰ τούτῳ παραπλήσιον ἡ βλαστολογία· καὶ γὰρ ἐνταῦθα εἰδέναι δεῖ τὰ ποῖα συμφέρει καταλιπεῖν καὶ τὰ ποῖα ἀφαιρεῖν καὶ πρὸς τοὺς ἐτείους καρπούς καὶ πρὸς τὴν ὕλην φύσιν. Τὰ δ' ἄλλα ἤδη κοινότερα καὶ ῥᾶω πάντα δ' ἔχοντα διαφορὰν ὥστε καιρὸν ζητεῖν καὶ τρόπον.

[2] Αἱ δὲ διαφοραὶ κατὰ τὰς ὥρας τῶν ἔργων αἱ μὲν καὶ ἐν τοῖς ἄλλοις εἰσίν, οὐ μὴν ἀλλὰ πλείστη γε κατὰ τὴν κλάσιν καὶ τὴν ἀμπελουργίαν ὑπὲρ ἧς καὶ πειρῶνται γε διαιρεῖν ἅμα τοῖς τε γένεσι ποιούμενοι καὶ ταῖς χώραις τὸν ἀφορισμόν. Ὁ δ' ἀφορισμὸς ἐν δυοῖν ἐν ποίαις ἕκαστα ὥραις δεῖ καὶ ἐν τῷ βραχυτομεῖν ἢ μακροτομεῖν· ἐπεὶ τό γ' εἰς τὴν ἀγωγὴν καὶ τὴν ὅλην τομὴν τῶν ἀμπέλων πανταχοῦ τὰ αὐτά.

[3] Σχεδὸν δ' ἐνιοὶ γε τὸν αὐτὸν ἀποδιδόασιν ἐπὶ τε τῶν γενῶν καὶ τῆς ὁμοίας χώρας ἀφορισμόν· οἷον τὸ βραχυτομεῖν ἐν τε ταῖς καυσώδεσι καὶ ξηραῖς καὶ τῶν ἀμπέλων ὅσαι τοιαῦται τυγχάνουσιν. Ἐγκαρπότεραι γὰρ γίνονται διὰ τὸ μᾶλλον δύνασθαι τρέφειν· μακροτομεῖν δ' ἐν ταῖς ἐναντίαις καὶ τὰς ἐναντίας οἷον ἐν ταῖς ἐφύγροις καὶ εὐτραφέσι καὶ ὅσαι τῶν ἀμπέλων τοιαῦται· φύσει τε γὰρ καρπιμωτέρας εἶναι καὶ τὸν γινόμενον καρπὸν ἐν ἄκροις μᾶλλον φύεσθαι τοῖς κλήμασιν.

[4] Ἐνιοὶ δὲ καθόλου περὶ πασῶν διαιροῦσιν οὐκ εἰς τὰς χώρας ἀποβλέποντες ἀλλ' εἰς αὐτὰ τὰ γένη καὶ τὰς διαθέσεις κελεύοντες σκοπεῖν πρὸς τὴν μήτραν ὥσπερ ἐπὶ τῶν αὐτῶν εἵπομεν ἐν τοῖς ἀποτεμονομένοις τῶν νέων κλημάτων. Ἐὰν μὲν γὰρ ἔχη πολλὴν πολλὰ καὶ βραχέα καταλιπεῖν, ὅπως βραχέων μὲν ὄντων δύνηται τρέφειν ἀπὸ πολλῶν δὲ πολὺς ὁ καρπὸς γίνηται, ἐὰν δ' ὀλίγην καὶ πολὺ τοῦ ἔνου κλήματος ἔχωσιν, ἐλάττω μὲν τὸ πλῆθος μεῖζω δὲ τὸ μέγεθος· ἀεὶ δὲ ὅσῳ ἐλάττω τὴν μήτραν τοσούτῳ μακρότερα λείπειν ἐν ἀπάσαις.

[5] Καθόλου μὲν οὖν οὕτω τὸ μέγεθος καὶ τὴν βραχύτητα τῶν κλημάτων καθ' ἐκάστην ποιεῖσθαι πρὸς τὴν μήτραν τὴν ἐν τοῖς ἀποτόμοις, ὅπως ἴση τὸ πλάτος ἢ τῷ περιεληφότι κλήματι. Τῆς γὰρ ἀμπέλου τεμονομένης ἐξ ἴσου πρὸς τε τὴν ἑξὶν τὴν ἑαυτῆς καὶ πρὸς τὴν τοῦ καρποῦ φορὰν πολυχρόνιον ἔσεσθαι

καὶ ἀγαθὴν διὰ τέλους. Ἐὰν δὲ ἡ μήτρα πλέον μέρος κατέχη τῆς τομῆς καρπὸν μὲν γίνεσθαι πολὺν τὰ δὲ κλήματα ἀμενηνὰ διὰ τὴν τῆς τροφῆς ἀσθένειαν.

[6] Ἐὰν δὲ αὖ τὸ κλῆμα τὸ ἐν τῇ τομῇ δυνατόν ἦ καὶ νεανικὸν καρπὸν ὀλίγον ἀπὸ μικρᾶς τῆς μήτρας· γίνεσθαι γὰρ τὸν μὲν βότρυν ἀπὸ τῆς μήτρας τὸ δὲ κλῆμα ἀπὸ τοῦ περιειληφότος κλήματος· δηλοῦν δὲ τὴν ἄμπελον αὐτὴν. Τὰ γὰρ ἐκ τῶν ἔνων νέα βλαστήματα πάντα ἄκαρπα γίνεσθαι διὰ τὴν μικρότητα τῆς μήτρας καὶ τὰς νέας τῶν παλαιῶν ἀφορωτέρας διὰ τὴν αὐτὴν αἰτίαν ὥς ἀπὸ τῆς μήτρας τῆς τε σαρκὸς καὶ τοῦ γιγάρτου γινομένου· ὅπερ οὐδ' ὑπολαμβάνουσιν οὐδ' ἔοικεν εἴπερ ἐξαιρεθείσης ἡ μὲν σὰρξ γίνεται τὸ δὲ γίγαρτον οὐ γίνεται, πλὴν εἰ ἄρα τοῦ ἐνδοτάτω τῆς μήτρας ἐξαιρουμένης. Τοῦτο μὲν οὖν ἐπισκεπτέον.

[7] Εἰ δ' ὅλως αἱ μείζους ἔχουσαι τὰς μήτρας εὐκαρπότεραι καὶ πολυκαρπότεραι τυγχάνουσιν οὐδὲν ἂν διαφέροι πρὸς τὰ νῦν. Κοινοτάτην μὲν δὴ ταύτην εἶναι πάσαις. Ὅσαι δὲ κλήματα μὲν πολλὰ φύουσι καρπὸν δ' ὀλίγον τούτων τὰ μὲν ἐξ ἄκρας τὰ πρῶτα ὥς μακρότατα λείπειν τὰ δὲ πρὸς αὐτὸ τὸ στέλεχος βραχέα, ὅπως ἀπὸ μὲν τῆς βραχείας τομῆς ἡ ἄμπελος αὐξῆται ἀπὸ δὲ τῶν ἐξ ἄκρου κλημάτων ὁ καρπὸς ἀπὸ μεγάλης τῆς μήτρας πολὺς (ἦ).

[8] Ὅταν δὲ βλαστάνῃ περιαιρεῖν τὰ ἄλλα πάντα πλὴν ὅσα καρπὸν ἔχει, τούτων (δ') ἐπικνίξειν τὰς κορυφὰς ἐν αὐταῖς ταῖς οἰνάνθαις, ἵνα μήθ' ἡ ἄμπελος εἰς τοῦτο τὸ κλῆμα ἀφίῃ τὴν αὐξῆσιν ὅπερ ἀποτέμενεται, ἢ τε περιοῦσα τροφὴ συνειληθεῖσα ἐπὶ ταῖς οἰνάνθαις αὐξῇ τὸν βότρυν. Αἰ γὰρ δεῖ τοῦτο ζητεῖν ἐκ τῆς τομῆς ὅπως ἢ τε ἄμπελος ἰσχύσει καὶ ὁ καρπὸς ἔσται πολὺς. Αὕτη μὲν δὴ καθόλου τίς ἐστι κοινὴ πάσαις.

[15.1] Ὡραν δὲ τῆς ἀμπελουργίας οἱ μὲν ταῖς χώραις μόνον διαιροῦσιν οἱ δὲ καὶ τῶν γενῶν ἐφάπτονται. Κελεύουσι δὲ τὰς μὲν ἐν τῇ ξηρᾷ καὶ θερμῇ πρωΐᾳ ἀμπελουργεῖν ὅταν τάχιστα παύσωνται φυλλοβολοῦσαι, τὰς δ' ἐν τῇ ψυχρᾷ καὶ ἐπόμβρῳ μικρὸν πρὸ τῆς βλαστήσεως. Αἱ μὲν γὰρ ἐν τῇ ξηρᾷ διασώζουσιν τὸ ὑγρὸν αὐταὶ τε βελτίους γίνονται καὶ ὁ καρπὸς ἡδυνότερος, αἱ δὲ ἐν τῇ ψυχρᾷ μεθεῖσαι τὸ ὕδωρ αὐταὶ μὲν οὐδὲν χεῖρους ὁ δὲ καρπὸς ἀσηπτότερος καὶ ἡδυνότερος. Τὰς δ' ἐν τῇ μέσῃ καὶ εὐκράτῳ κατὰ τὸ μέσον τῶν ὥρων.

[2] Ἔνιοι δὲ ὅλως πρῶτ' ἅσας κελεύουσιν ὥσπερ εἶπομεν ὅτι παχύτερόν τε τὸ κλῆμα γίνεται καὶ ἀμβλωπεῖς οὐκ ἔσονται καὶ ἐν εὐδίᾳ συμβήσεται τὰς

τομὰς ἐπιξηραίνεσθαι· πάντα δὲ ταῦτα συμφέρει. Χειμῶνος μὲν γὰρ οἱ πολλοὶ τῶν ὀφθαλμῶν ἀπόλλυνται ῥίγει καὶ ἡ τομὴ βίᾳ ξηραίνομένη ῥήγνυται, τοῦ δὲ ἔαρος ῥεῖ τό τε δάκρυον καὶ ἀμβλωπεῖς ἐπιγίνονται πολλαί.

[3] Καίτοι τινὲς οὐ διὰ τοῦθ' ὑπολαμβάνουσιν ἄλλ' ὥς τίκτουσαν τὴν ἄμπελον εὐθὺς ὅταν τρυγηθῇ καὶ τότε γινόμενον τὸν καρπὸν· οὐ γὰρ οἶόν θ' ἅμα δύο γόνους ἔχειν· οὐκ ὀρθῶς λέγοντες· γίνεσθαι γὰρ θέρους τὸν καρπὸν ὅταν ἦ πολὺ τὸ ὑγρόν· ἐκ τούτου γὰρ τὴν γένεσιν εἶναι· τεκμήριον δέ· ἐὰν γάρ τις ἐργάσῃται τὰς διὰ χειμῶνος ἀργὰς ἀρχομένου τοῦ θέρους εὐθὺς τὰ κλήματα πυκνόφθαλμα γίνεσθαι διὰ τὸ πλῆθος τοῦ ὑγροῦ· τοῦτο δὲ τὴν ἐργασίαν ποιεῖν ὅτι πληροὶ. Τὸν δ' ἥλιον θερμαίνοντα πηγνύναι καὶ πυκνοτέρους τοὺς ὀφθαλμοὺς γίνεσθαι καὶ βότρυς πλείους.

[4] Οἱ δὲ ταῦτα κελεύοντες ἄλλως πως τὰς αἰτίας λέγουσι· φασὶ γὰρ τοῦτο δεῖν ἐν τῇ θερμῇ καὶ λεπτῇ καὶ διὰ τοῦτο πρῶτ' ποιεῖν ὅπως τὸ ὕδωρ εἰς τὰ καιριώτατα τῶν κλημάτων ἔλθῃ καὶ ἔχῃ τροφὴν ἐν τῷ θερεῖ· τὰς δ' ἐν τοῖς ἐφύδροις ἢ ὅσα τῶν γενῶν ὑβριστικὰ τοῦ ἥρος ὅπως διεσκεδασμένου τοῦ ὑγροῦ καὶ τμηθείσης ἐν ὥρᾳ τοῦτ' ἀπορρυῇ. Διὰ γὰρ τὸ πλῆθος οὐ πεττούσας τοῦθ' ὑβρίζειν ἄλλως καὶ ἐκκληματοῦσθαι. Φυτοῖς δ' οὐσι τοῖς τοιούτοις καὶ ἐπισπείρειν ἐπὶ τὰ ἄνθηρα δεῖ κριθᾶς καὶ κυάμους ἐπειδὴ ταῦτα ξηραντικώτατα πάντων.

[5] Αἱ μὲν οὖν αἰτίαι σχεδὸν αὗται παρ' ἐκάστων. Ἀκριβεστάτη δὲ ἡ ἐν ἀμφοῖν διαίρεσις, ἐν τε ταῖς χώραις καὶ τοῖς γένεσι καὶ πρὸς τὰς ὥρας καὶ πρὸς τὸ βραχυτομεῖν ἢ μακροτομεῖν. Ἐνια γὰρ οὐ φέρουσι κἄν βραχὺ τμηθῶσιν ἄλλ' εἰς τὴν βλάστησιν τρέπονται καθάπερ ἡ ἀφυταῖος καλουμένη. Καὶ ἐν Ἀκάνθῳ δὲ ἐπὶ τέτταρας ὀφθαλμοὺς ἐλαχίστους τέμνουσιν. Αἱ δὲ μακροτομούμεναι ταχὺ καταγηράσκουσι διὰ τὴν πολυκαρπίαν. Νέας δ' οὖν οὐσας ἀναγκαῖον βραχυτομεῖν ὅπως καὶ ῥιζωθῶσι καὶ αὐξηθῶσι. Καὶ περὶ μὲν ἀμπελοργίας ἐκ τούτων ἂν τις θεωρήσειεν.

[16.1] Ἐπεὶ δ' ὅμοιον τῷ τοιούτῳ καὶ ὥσπερ δεύτερον ἢ βλαστολογία δεῖ καὶ ταύτην εὐθὺς ποιεῖσθαι καὶ βλαστολογεῖν ὅταν διαφαίνωσι τὸν καρπὸν. Μετὰ δὲ ταῦτα εὐθὺς τὸ δεύτερον σκάπτειν ὅπως ὁ τε καρπὸς καὶ ὁ βλαστὸς νέος ὢν καὶ ἐν ὀρμῇ τοῦ βλαστάνειν ὥραιαν λάβῃ τὴν σκαπάνην, ἔπειτα πάλιν βλαστολογεῖν πρὸ τοῦ ἀνθεῖν. Συμβαίνει γὰρ ἐν τούτῳ τὸ βοστρύχιον αὔξεσθαι διὰ τὸ μήπω συνεστᾶναι τὰς ῥάγας, ὅταν δὲ ἀπανθήσῃ τὸ μὲν συνέστηκεν αἱ δὲ συνίστανται καὶ αὐξοῦνται.

[2] Τὸ δ' ὅλον ἀκμαῖα μάλιστ' ἀποδίδοσθαι ζητεῖ τῶν ἔργων ἢ τε

βλαστολογία καὶ ὁ σκαφητὸς ὁ μέσος· τῇ γὰρ ἀμπέλῳ τότε συμβαίνει πρὸς αὐξήσιν ὁρμῶν τῶν τε παρόντων καρπῶν καὶ τῶν βλαστῶν ἐν οἷς ἄρχεται γονεῦειν τὸν εἰς νέωτα καρπὸν. Ἐὰν οὖν ὁ καιρὸς μὴ παρεθῇ καλῶς γονεύσει· βλαστάνει δὲ μεχρὶ τοῦ κυνὸς ἐπιτολῆς, ὅταν δὲ ἐπιτείλῃ παύεται τὰ μέλλοντα καλῶς ἐγκύμονα γίνεσθαι. Θερμαίνοντος γὰρ τοῦ ἡλίου τὸ προηγούμενον τῶν βλαστῶν ἀπαλὸν ἀποσκληρύνεται καὶ παύεται· πεπαυμένης δὲ τῆς αὐξήσεως φύσιν ἔχει τὸ συνίστασθαι τὴν ὑγρότητα τοῦ βλαστοῦ καὶ ἐκ ταύτης φύεσθαι τὸν καρπὸν. Ὅσα δ' ἐν παλινσκίοις ἢ ἐφύδροις ἐστὶ κρατεῖ τοῦ ἡλίου καὶ πλείω χρόνον αὐξεται.

[3] Καιρὸν δὲ τινα ζητεῖ καὶ ἡ διαστολὴ καὶ ἡ κόλουσιν, οὐ μὴν ἄσημον γ' ὁμοίως οὐδὲ χαλεπὸν καταμαθεῖν. Τὴν δ' ὑποκόνισιν τὸ μὲν ἐν τοῖς πρώτοις καιροῖς ὅταν ἄρχωνται περκαΐζειν οἱ βότρυες μὴ ἔαν ἄχρι οὗ πεπανθῶσιν ὀρθῶς ἔχει· κωλύουσι γὰρ τὴν ὁρμὴν τῆς πέψεως ἀντισπῶντες ἐτέρᾳ κινήσει· δι' ὃ οὐδὲ τὴν πόαν οἴονται δεῖν ἐκτίλλειν. Ὡς δ' ὅλως ἀχρεῖον καὶ βλάπτον οὐκ ὀρθῶς· ἢ τε γὰρ χρεῖα μαρτυρεῖ καὶ τὸ ἐφ' ἐτέρων γινόμενον· οἱ γὰρ σίκυοι δοκοῦσι τρέφεσθαι τούτῳ καὶ ἀπαλότεροι γίνεσθαι κατακρυπτόμενοι τῷ κονιορτῷ δι' ὃ καὶ Μεγαρεῖς κρύπτουσι.

[4] Θαυμάζεται δ' εἰ ξηρὸς ὢν τρέφει· τὸ δ' αἴτιον ἴσως ἐκ πλειόνων ἂν εἴη καὶ τῷ κινουμένης τῆς γῆς ἀναδίδοσθαι τροφὴν ἐνίκμου τινὸς ἀέρος ὥσπερ ἐπὶ τῶν ἀτμωδῶν ἐλέχθη καὶ τῷ προβολῇν ἅμα πρὸς τὸν ἥλιον εἶναι· καὶ ἔτι καταξηραίνόμενος ἀπαλῇ ξηρότητι καὶ μαλακῇ μᾶλλον ἐπισπᾶται τὴν τροφὴν ἐκ τοῦ ἀέρος· πάντα γὰρ ταῦτα συνεργεῖ καὶ πρὸς εὐτροφίαν καὶ πέψιν. Ἡ δὲ τῶν σικύων κατάκρυψιν οὐκ ἄλογος· ἀναξηραίνων γὰρ ὁ ἥλιος σκληρύνει δι' ὃ καὶ ὑπὸ τὰ φύλλα κρύπτουσιν ὥστε ἐπιβολὴν ἔχοντες καὶ βρεχόμενοι ἀμφοτέρως εὐτραφεῖς γίνονται καὶ ἀπαλοί. Καὶ περὶ μὲν ἀμπέλων ἱκανῶς εἰρήσθω.

[17.1] Πάντων δὲ ιδιώτατον εἶναι δοκεῖ τῶν κατὰ τὰς θεραπείας οἱ ἅλεις οἱ τοῖς φοίνιξι παραβαλλόμενοι, καὶ γὰρ πρὸς εὐβλαστίαν καὶ πρὸς εὐκαρπλίαν χρήσιμοι· ἐπεὶ ὅσα γε πρὸς ἰατρειάν τινὰ τῶν τοιούτων ἢ φυλακὴν οὐδὲν ἄτοπον οἶον ἢ τέφρα ταῖς τε συκαῖς καὶ τῷ πηγάνῳ [ξηρὰ γὰρ] πρὸς τὸ μὴ σκωληκοῦσθαι μηδὲ σήπεσθαι τὰς ρίζας· βοηθεῖ γὰρ καταξηραίνουσα.

[2] Περὶ δὲ τῶν ἁλῶν ἢ τῆς ἄλμης ἦν παρέχουσιν, οἱ μὲν γὰρ οὕτως ποιοῦσιν οἱ δ' ἐκείνως, ἀπλῇ μὲν τις αἰτία δι' ὅτι φιλεῖ χωρία ἁλμυρῶδη. Σημεῖον δ' ὅτι παρ' οἷς πλῆθος φοινίκων ἐν τούτοις (ἅλς) ἐστίν, οἶον Λιβύη, Συρία, ταῖς ἄλλαις ὥστε καθάπερ οἰκείαν τινὰ βοήθειαν βοηθοῦσι διὰ τῶν

ἀλῶν. Ὅτι μὲν γὰρ ὁ φοῖνιξ χαίρει τῷ ἀλμώδει κοινή τις ἂν αἰτία λέγοιτο περὶ πάντων ὅσα ζητεῖ τόπους διαφόρους ἀπὸ τῶν πρώτων καὶ μεγίστων ἀρχομένοις οἷον ἐνύδρων χερσαίων καὶ ὅσαι δὴ καθ' ἑκάτερα τούτων διαφοραί.

[3] Δῆλον γὰρ ὡς τῇ κράσει πως σύμμετροί τε καὶ οἰκεῖοι καθ' ἕκαστα τυγχάνουσιν ὥσπερ ἐπὶ τῶν ζώων· ὁ γὰρ αὐτὸς λόγος καὶ περὶ τούτων καὶ ἡ αὐτὴ ζήτησις. Οὐ μὴν ἀλλ' εἴ γέ τι καὶ περὶ τούτου ἴδιον χρὴ εἰπεῖν ἐν ἀμφοῖν τὴν αἰτίαν ζητητέον ἐν τε τῷ τὴν γῆν ποιάν τινα ποιεῖν καὶ ἐν τῷ τὰς ρίζας ἅπερ ἄμφω συμβαίνει διὰ τῶν ἀλῶν· τὴν μὲν γὰρ ποιοῦσι κούφην καὶ χαύνην τὰς δὲ ρίζας εὐτραφεστέρας καὶ παχυτέρας ἐλκτικωτέρας ποιοῦντες τῷ πόρους τινὰς ἀνοίγειν καὶ ἔτι τῷ καταψύχειν, ὅπερ ἡ κόπρος οὐ ποιεῖ διὰ τὸ ἔμπυρον.

[4] Ὁ δὲ φοῖνιξ τὸν μὲν ἀέρα τὸν περιέχοντα ζητεῖ θερμὸν, οὕτω γὰρ ἡ πέπανσις τοῦ καρποῦ, τὰς δὲ ρίζας καταψύχεσθαι διὰ τὴν ξηρότητα, τοῦτο δὲ ποιοῦσιν οἱ ἄλλες. Ὅθεν καὶ τοῖς μὲν χρῶνται Βαβυλωνῖοι, τῇ κόπρῳ δὲ οὐ χρῶνται. Τοῦ δὲ μόνῳ τούτῳ συμφέρειν τὴν ιδιότητα τῆς φύσεως αἰτιατέον· ὥσπερ γὰρ τὸ ξύλον καὶ αἱ ρίζαι διάφοροι τῶν ἄλλων δι' ὅπερ ἀναδηχθεῖσαι μᾶλλον ἐπισπῶνται τὴν τροφήν καὶ αὐταὶ ἀρκοῦνται καὶ τὸ ὅλον δένδρον αὐξοῦσι.

[5] Ποιεῖ δὲ καὶ ὡς ἡ γεωργία τὰς ρίζας πάντων ἐλκτικωτέρας· οὕτω γὰρ καὶ ἐξημεροῦνται τῶν ἀγρίων ἔνια· καὶ ἡ κόπρος δ' ἡ ἰσχυροτάτη τὸ αὐτὸ τοῦτο δρᾷ, καθάπερ ἡ σκυτοδεσπικὴ τὰς τῶν μυρρίνων καὶ οὔρον παραχεόμενον· ἅμφω γὰρ διαδύνηται μᾶλλον· αἱ δὲ ρίζαι δέονται τῆς ἀναδήξεως καὶ τινῶν ἄλλων τοιούτων καὶ τῶν ροιῶν· καὶ γὰρ ταύταις παρέχουσιν καὶ τὴν σκυτοδεσπικὴν παραβάλλουσι πλὴν οὐχ ὁμοίως καὶ τῆς μυρρίνης ἄλλ' ἥττον·

[6] αἱ δ' ὕγραὶ καὶ σαρκώδεις οὐ δέονται τῆς ἀναστομώσεως καὶ δήξεως. Ὅλως δ' αἱ μεταβολαὶ τῶν δένδρων διὰ τὰς θεραπείας ὥστε ἐξ ὀξέων καὶ πικρῶν γλυκέα γίνεσθαι καθάπερ αἱ τε ροαὶ καὶ αἱ ἀμυγδαλαὶ καὶ εἴ τι ἄλλο τῷ τὰς ρίζας ἀλλοιοῦσθαι μεταβάλλει· μεταβάλλουσι δὲ κατὰ τὴν γῆν καὶ τὴν τροφήν· γλυκέα μὲν οὖν μετὰ τρία ἢ τέτταρα ἔτη γίνεται· τοσοῦτον γὰρ ἡ θεραπεία· ροαὶ δὲ πικραὶ διαμένουσι καὶ τινα πλείω χρόνον.

[7] Μεταβολὴ δ' εὐλόγως τῶν καρπῶν ἐκπεττομένης μᾶλλον τῆς τροφῆς, ἐκπέττεται δὲ τῷ τοιούτῳ ποιάν τινα τὴν ρίζαν εἶναι. Τὸ δ' ὅλον ὥσπερ καὶ πρότερον ἐλέχθη περὶ τῶν σπερμάτων κινουμένης καὶ μεταβαλλούσης τῆς ἀρχῆς συµμεταβάλλει καὶ ἄλλα καὶ ἡ ὅλη φύσις. Αἱ τροφαὶ δὲ κινοῦσιν καὶ

ἐξαλλοιοῦσιν ἐὰν πλείω γίνωνται χρόνον. Ἐπεὶ καὶ ὅσα τοῖς θερμοῖς ἀρδευόμενα βελτίω καθάπερ ἢ τε μηλέα ἢ ἡρινῇ καὶ ὁ μύρρινος· καὶ γὰρ οὕτως ἀπύρηνος ὥσπερ φασὶ γίνεται. Καὶ ἐξ ἀρχῆς οὕτω συνώφθη κατὰ σύμπτωμα πρὸς λούτρῳ ὄντος μυρρίνου καὶ ἐξημελημένου· τούτου γὰρ ἀπυρήνου γενομένου λαμβάνοντες ἐφύτευον ὅθεν τὸ γένος Ἀθήνησι γέγονεν. Ἀλλὰ ταῦτα μὲν ἔχοντά τινα ὁμοιότητα πρὸς πίστιν εἴρηται τῶν ἐξ ἀρχῆς.

[8] Ἡ δ' ἀλυκότης τῶν ὑδάτων ὅτι καὶ τῶν λαχανωδῶν τισὶν ἀρμόττει καὶ δι' ὅτι τῷ λίτρῳ χρῶνται πρὸς ἓνια πρότερον εἴρηται, δι' ὃ καὶ τοῦθ' ὡς (ἐοικὸς) οἰκεῖον παραληπτέον· ἀπὸ γὰρ τούτων δηλὸν ὅτι καὶ τῆς τροφῆς καὶ τούτων ἡ γλυκύτης. Ἀλλὰ τοῖς μὲν πικρότης τις ἐν τοῖς χυλοῖς σύμφυτος τῷ δὲ φοίνικι στρυφνότης ἦν ἐξαιρουσιν εὐθὺς οἱ ἄλλες ἐκ τῆς πρώτης ἀρχῆς. Περὶ μὲν οὖν τῶν ἁλῶν ἱκανῶς εἰρήσθω.

[18.1] Τὸ δὲ μὴ ἐπιμένειν ἐπὶ τῷ θήλει φοίνικι τὸν καρπὸν ἂν μὴ τὸ τοῦ ἄρρενος ἄνθος κατασειώσῃ ἅμα τῷ κονιορτῷ κατ' αὐτοῦ, καὶ γὰρ τοῦτο λέγουσιν τινες, ἴδιον μὲν παρὰ τὰ ἄλλα παρόμοιον δὲ τῷ ἐρίνασμι τῶν συκῶν. Ἐξ ὧν πρὸς τὸ τελειογονεῖν μὴ αὐτάρκες εἶναι τὸ θήλυ καὶ μάλιστα ἂν τις ἐπαγάγοι, πλὴν ἐχρῆν τοῦτο μὴ ἐφ' ἐνὸς ἢ δυοῖν ἄλλ' ἐπὶ πάντων ἢ τῶν πλείστων εἶναι· τὴν γὰρ φύσιν οὕτω κρίνομεν τοῦ γένους. Ἀποπώτατον δὲ καὶ ἐπ' αὐτῶν τούτων τὸ τοῦ φοίνικος, ὃ γὰρ ἐρίνασμος δοκεῖ φανεράν ἔχειν τὴν αἰτίαν. Ἀλλὰ περὶ μὲν τούτων ἄλῃς.

[2] Ἡ δὲ τῶν ἄλλων ιδιότης ὅσων ἐστὶν συμφανεστέρας ἔχει τὰς αἰτίας, οἷον ὡς τὴν ἀμυγδαλὴν ὅταν ἀρχηται καρποφορεῖν οὔτε ὑδρεύουσιν οὔτε κοπρίζουσιν οὔτε διακαθαίρουσιν εἰ μὴ τὰ αὐτὰ μόνον, οὐδ' ἄλλο τῶν τοιούτων οὐδὲν δρῶσι· πάντα γὰρ ἀφαιροῦσιν ὅπως μὴ ὑπερισχύσασα ἀποβάλλῃ τοὺς καρποὺς ἐν τῷ ἀνθεῖν, δι' ὃ καὶ χώραν οὐκ ἀγαθὴν ζητοῦσιν. Ἐὰν δὲ μετὰ ταῦτα ἀκαρπῇ τὰς τε ρίζας γυμνώσαντες παραδιδόασιν τῷ χειμῶνι καὶ τὰς ἄλλας κολάσεις προσφέρουσι τὰς εἰρημένας.

[3] Ὅμοίως δὲ ὅσων οἱ φλοιοὶ περιαιροῦνται καθάπερ ἀμπέλου, κέδρου, φιλύρας καὶ ὅλως τῶν φλοιορραγῶν. Αὐτὴ γὰρ ἡ φύσις ἐνταῦθα ἔοικεν ἐπιδεικνύναι τὸ συμφέρον ἀφισταμένη καὶ ἀλλότριον ποιοῦσα· τὸ δ' ἀλλότριον ἅπαν βλαβερὸν ὥσπερ καὶ τὸ αὖτον. Καὶ ἐπὶ τῶν ἄλλων δὲ τὸν αὐτὸν τρόπον ὅπου τις ιδιότης οἰκεῖα πρὸς τὴν φύσιν. Καὶ περὶ μὲν δένδρων ἐκ τούτων θεωρητέον.

[19.1] Ἐχει δὲ ὁμοίως καὶ ἐπὶ τῶν στεφανωματικῶν καὶ ὅλως τῶν φρυγανικῶν σχεδὸν δὲ καὶ τῶν λαχανηρῶν. Τὰ μὲν γὰρ ἐστὶ κοινὰ πᾶσιν οἷον

ὑδρευσίς, κόπρις, ἢ τοῦ ἐδάφους ἐργασία, τὰ δὲ ἴδια καθ' ἕκαστον γένος οἶον ἢ διακάθαρσις· [τοῖς φρυγανικοῖς ὁμοίως ἐν στεφανώμασι καὶ λαχάνοις] καὶ γὰρ ὁ ἔρπυλλος αὐαίνεται μὴ διακαθαίρομενος καὶ τὸ σισύμβριον καὶ τᾶλλα. Τὰς δὲ δὴ ῥόδωνίαν οὐ κατακόπτουσι μόνον ἀλλὰ καὶ ἐπικάουσιν· ἀνανθεῖς γὰρ γίνονται καὶ ἐκλοχμοῦνται μὴ τοῦτο πάσχουσαι δι' εὐτροφίαν.

[2] Καὶ ὁ ῥάφανος δὲ καὶ τὸ πηγανὸν ἀποσκληρύνονται καὶ ἀποξηραίνονται. Κολουσθέντα δὲ καὶ παλιμβλαστῇ γενόμενα μεῖζω καὶ καλλίω καὶ εὐχυλότερα· δεῖ γὰρ καὶ τῶν χυλῶν καὶ τῶν ὁσμῶν ἀφαιρεῖσθαι τὸ ἄγαν δριμύ, τῇ γὰρ μεσότητι τὸ ἥδυν καὶ τὸ σύμμετρον. Ἐν δὲ τοῖς ἄλλοις ἀφαίρεσις μὲν οὐκ ἔστι πλὴν ὅσα κειρόμενα καλλίω καθάπερ τὸ πράσον ἢ εἴ τι τῶν πολυβλαστῶν.

[3] Ἡ δὲ τῶν παραφυομένων ἐξαίρεσις καὶ ἡ αὐτῶν τῶν ὁμογενῶν ὅταν ᾗ πυκνὰ καταπερεὶ διακάθαρσις γίνεται τροφὴν πλείω ποιούσα καὶ αὐξησιν τοῖς λοιποῖς. Ἔχει δὲ καὶ ιδιότητος ἕνια καθάπερ ἐπὶ τοῦ πηγάνου πρότερον ἐλέγχθη καὶ ἐπ' ἄλλων ἐστίν. Ἀλλὰ ταῦτα μὲν ἐλάττω καὶ σχεδὸν φανερά.

[20.1] Λοιπὰ δὲ καὶ ὥσπερ ἀντικείμενα τοῖς περὶ τὰ δένδρα τὰ περὶ τὴν ψιλὴν γεωργίαν ἐστίν· ἐνταῦθα δὲ ἢ τε τῆς γῆς κατεργασία καὶ ἡ τῶν σπόρων ὥρα καὶ μετὰ ταῦτα σπαρέντων κατεργασία, πρότερον δ' ἔτι τούτων ἢ καὶ ἅμα τὴν οἰκείαν ἐκάστῳ σπέρματι ἰδεῖν ὥσπερ καὶ ἐπὶ τῶν δένδρων. Ἔστι δὲ καὶ κατὰ τὰς ἐργασίας τὸ οἰκεῖον, οἶονεὶ τὴν μὲν θέρους τὴν δὲ χειμῶνος νεῆν ἢ σκάπτειν ἢ τι τοιοῦτον ἕτερον, ἅπερ ἐπιχειροῦσί τινες διαιρεῖν.

[2] Δεῖ γὰρ ὥς φασὶ τὴν μὲν ἐπομβρον καὶ στερεὰν καὶ βαρεῖαν καὶ τὴν πίειραν θέρους ἐργάζεσθαι καὶ τοῖς ἀρότροις καὶ τῇ σκαπάνῃ, τὴν δὲ ξηρὰν καὶ μανὴν καὶ τὴν λεπτὴν καὶ κούφην τοῦ χειμῶνος. Δύναται γὰρ ἢ μὲν ξηραίνειν καὶ λεπτύνειν, ἢ δὲ χειμερινὴ παχύνειν καὶ ὑγραίνειν. Ἐκατέρα δὲ τούτων δεῖται πρὸς τὸ ἐνδεὲς τῆς φύσεως. Καὶ κοπρίζειν πλείον μὲν τὴν λυπρὰν ἔλαττον δὲ τὴν ἀγαθὴν καὶ διὰ τὴν ἀρετὴν τῆς γῆς καὶ διὰ τὸ ἐκ τῆς κόπρου πλείω λαμβάνειν τροφὴν ἢ ὥστε πέττειν.

[3] Μίσγειν δὲ καὶ τὴν γῆν τὴν ἐναντίαν οἶον τῇ βαρεῖᾳ τὴν κούφην καὶ τῇ κούφῃ τὴν βαρεῖαν καὶ τὴν λεπτὴν τῇ πιεῖρᾳ, ὡσαύτως δὲ καὶ τὴν ἐρυθρὰν καὶ τὴν λευκὴν καὶ εἴ τις ἄλλη ἐναντιότης. Οὐ γὰρ μόνον ἡ μίξις ἀποδίδωσι τὸ ἐλλεῖπον, ἀλλὰ καὶ ὅλως σφοδροτέρας ποιεῖ καὶ ἐὰν ἡ τυχοῦσα ᾗ μίξις· οἶον ἐὰν τὴν ἀπειρηκυῖαν καὶ μὴ δυναμένην φέρειν ἑτέρα μίξης πάλιν φέρει καταπερανεὶ καινὴ γεγεννημένη, καὶ ἡ καθ' αὐτὴν οὐ φέρουσα καθάπερ ἡ ἄργιλος ὅταν μιχθῇ ποιεῖ φορόν· ὥσπερ γὰρ κόπρος ἢ ἑτέρα τῇ ἑτέρᾳ γίνεται.

[4] Δι' ὃ ταῦτα ποιοῦσι Μεγαρεῖς καὶ δι' ἐτῶν πέντε ἢ ἑξ σκάπτοντες βαθεῖαν ἀναβάλλουσι τὴν κάτωθεν ἐφ' ὅσον διῴκνεῖται τὸ ὕδωρ ἵνα καινὴν ποιῶσιν· ἡ γὰρ τρόφιμος ἀεὶ καταρρεῖ ὑπὸ τοῦ ὕδατος. Σπείρειν δὲ κελεύουσι τὴν ξηρὰν καὶ τὴν θερμὴν πρὸ τῶν ὑδάτων ὅπως λαμβάνουσα πλῆθος ὕδατος ἐκτρέφειν δύνηται. Καὶ τὴν δ' ἐπομβρίαν ὡσαύτως ἵνα τὰ σπέρματα λαμβάνωσι καὶ βλαστόντα καὶ αὐξηθέντα θερμῇ τῇ γῇ δυνατώτερα δέχεται τὸν ὄμβρον· ἐὰν δὲ μὴ ἐν ξηρᾷ προεργασάμενον τὴν γῆν ὁψὲ ποιεῖσθαι τὸν σπóρον.

[5] Σπείρειν δὲ δεῖ τὸν μὲν πρωῒνὸν μανὸν τὸν δὲ ὄψιον πυκνόν· ὁ μὲν γὰρ οὐκ ἔχει ρίζωσιν ὁ δὲ ἔχει καὶ γίνεται πολυσχιδής. Ταῦτα μὲν οὖν καὶ τὰ τοιαῦτα, πλείω γὰρ ἐστὶ, διακριβοῦν εἴ τις θέλει τὰς ἐργασίας μᾶλλον, ἕκαστα δεῖ σκοπεῖν πρὸς τὴν χώραν· ἐνταῦθα γὰρ οὐ δέχονται τὰς ἀκριβείας ἀλλὰ διαμάρτοι ἂν ὁ ποιῶν. Ὅπερ ἔπαθ' ἐπεὶ ἀνελθὼν εἰς Συρακούσας ἐκ Κορίνθου τὴν ἐργασίαν τὴν ἐντεῦθεν μεταφέρων· καὶ γὰρ τὸ χωρίον τὸ δοκοῦν ἀγαθὸν ἐκλιθολογήσας διέφθειρεν· ἐξεπήγνυτο γοῦν ὁ σῖτος οὐκ ἔχων οὐδεμίαν προβολὴν ἐξαιρεθέντων τῶν λίθων. Καὶ τις ἐν Συρίᾳ κατὰ βάθος ἀρόσας ἀνεξήραρεν· ὑπὸ γὰρ τοῦ θέρους διακαιομένα (ἡ γῆ) ἐπὶ πλεῖον ὑπόπετρος οὔσα διέκαιε (δι' ὃ) καὶ μικροῖς ἀρότροις οἱ Σύροι χρῶνται. Ταῦτα μὲν οὖν πειρατέον ἐπικρίνειν.

[6] Ὡς δὲ κοινῇ καὶ καθόλου πᾶσιν εἰπεῖν μέγιστον μὲν καὶ πρῶτόν ἐστι τὴν σπορευτὴν χώραν κατειργάσθαι καλῶς· εἰς διειργασμένην γὰρ καλῶς πεσὼν τὸ σπέρμα καλῶς ἐκφύεται διημερωθείσης τῆς γῆς. Εἴθ' ἡ κόπρις καὶ ἡ ἄλλη θεραπεία μετὰ ταῦτα διαβεβλαστηκότων ἤδη, οἷον σκάσις καὶ ποασμός.

[7] Ἡ δὲ κατεργασία ἐν τῷ νεᾷν κατ' ἀμφοτέρας τὰς ὥρας καὶ θέρους καὶ χειμῶνος ὅπως χειμασθῇ καὶ ἡλιωθῇ ἡ γῆ καθάπερ καὶ ἐπὶ τῆς φυτείας ἐλέχθη. Πολλάκις γὰρ μεταβληθεῖσα μανὴ καὶ κούφη καὶ καθαρὰ γίνεται τῆς ὕλης ὥστε ῥαδίως ἐκτρέφειν. Καὶ διὰ τοῦτο κελεύουσιν οὐδὲ τὰ χεδροπὰ συμβάλλειν εἰς τὰς νέας ἐὰν μὴ τι σφόδρα πρῶϊον ὅπως μὴ κωλύσῃ τὴν θερινὴν νέανσιν· ἀγαθὴν γὰρ οἶονται τὴν χιόνα ταῖς χειμεριναῖς νέαις καὶ οὐχ ἥττον τὴν ἀάχνην εἶναι· διεσθίειν γὰρ καὶ μανοῦν τὴν γῆν.

[8] Καὶ ὅταν μετὰ τοὺς πρώτους ἀρότους νεάσῃ πάλιν τοῦ ἥρος μεταβάλλουσιν ὅπως τὴν ἀναφυομένην πόαν ἀπολέσωσιν, εἴτα θέρει ἀροῦσι καὶ πάλιν ὅταν μέλλωσι σπείρειν ὑπήροσαν ὡς δέον καθάπερ ἐλέχθη προκατεργάσασθαι καὶ περὶ τοῦτο μάλιστα σπουδάσαι. Δι' ὃ καὶ τὴν ἀπὸ τῆς

δικέλλης ἐργασίαν μᾶλλον ἐπαινοῦσιν, ἢ δ' ἀπὸ τοῦ ἀρότρου δοκεῖ πολλὰ παραλείπειν. Θέτταλοι δ' ἰσχυρότερον ἔτι τῆς δικέλλης ὄργανον ἔχουσιν ὃ καλοῦσι μίσχον ὃ μᾶλλον εἰς βάθος κατιὸν πλείω γῆν περιτρέπει καὶ κατωτέρωθεν. Αὕτη μὲν οὖν τῆς χώρας ἡ κατεργασία.

[9] Συμβαίνει δὲ τοῖς εἰς ταῦτα πονήσασιν ἦττον ἐν τοῖς ἄλλοις κακοπαθεῖν· ὅσοι δ' ἂν μαλακωτέρως, ἀναγκάζονται πολλάκις καὶ σκάλλειν καὶ βοτανίζειν ἅτε πολλῆς πόας ἐκφυομένης. Οὕτω γὰρ ἀπόλλυται τὰ σπέρματα, προτερεῖ δὲ τοῦ σίτου διὰ τε τὴν ἰσχὺν καὶ τὸ προϋπάρχειν· ἐπεὶ πρότερον αὐξηθέντος τοῦ σίτου πολλὰ καταπνίγεται καὶ ἀπόλλυται καὶ τὸ ὅλον οὐχ ὁμοίως βλάπτει τὰ σπέρματα.

[21.1] Τὰ δ' οἰκεῖα τῇ μὲν ἐπόμβρῳ καὶ ψυχρᾷ τὰ ἀνοστιμώτατα πρὸς τὴν σιτοποιίαν ὁμοίως καὶ πυρῶν καὶ κριθῶν καὶ τῶν ἄλλων· ἀραιὰ γὰρ ταῦτα. Τὰ δ' ἄλλα πλείονος ὄμβρου δεῖται· καὶ τὰ μέλανα τῶν λευκῶν. Ἐν δὲ ξηρᾷ καὶ ἐρυθρᾷ καὶ ἐν ψυχροῖς τόποις πολύνοστα· καὶ τὰ λευκὰ μᾶλλον τῶν μελάνων ὅπως ἀδρῦνῃται πρὸ τῆς ἀπολείψεως τῶν ὑδάτων· αὖξεται γὰρ καὶ φθάνει τὰ λευκὰ μᾶλλον τῶν μελάνων. Ἐν δὲ ταῖς εὐκρασίαις τὰ ἀνὰ μέσον. Οἱ μὲν οὖν οὕτω διαιροῦσιν οἱ δ' ἄλλως.

[2] Ὡς δ' ἀπλῶς εἰπεῖν ἡ μὲν λεπτὴ κριθοφόρος ἀμείνων, ἡ δὲ πείριρα πυροφόρος· αἱ μὲν γὰρ ἐλάττους καὶ κουφοτέρας δέονται τροφῆς, οἱ δὲ πλείονος καὶ σωματωδεστέρας. Τῶν δὲ πυρῶν ὁ μὲν τρίμηνος ἐν τοῖς λεπτογείοις καλλίων· σύμμετρος γὰρ ἡ τροφή κούφη κούφοις· ὁ δὲ λιβυκὸς καὶ ὁ δρακοντίας καὶ ὁ στραγγίας καὶ ὁ σελινούσιος ἐν ἀγαθῇ, πολύτροφοι γάρ· σημεῖον δ' ὅτι κάλαμον ἔχουσι παχύν· ἀπλῶς δὲ καὶ εἴ τις ἄλλος τοιοῦτος. Εἰ δέ τις πολυχίτων ὥσπερ ὁ θράκιος, ἐν τοῖς χειμερινοῖς· ἀπαθὴς γὰρ ὑπὸ τοῦ ψύχους· ὁ δὲ χαῦνος καὶ μανὸς ὥσπερ ὁ καγχρυδίας, ἐν τοῖς ἐπόμβροις· τροφῆς γὰρ πολλῆς καὶ οὗτος δεῖται, δι' ὃ καὶ παχυκάλαμος.

[3] Ὡσαύτως δὲ καὶ ἐπὶ τῶν χεδροπῶν. Ἡ μὲν γὰρ γλίσχρα καὶ μελάγγεως ἐρέβινθον, ἡ δὲ κούφη κύαμον φέρει καλλίω, σύμμετρα γὰρ ἑκατέρῳ τὰ τῆς τροφῆς. Καὶ ἐπὶ τῶν ἄλλων δὲ τὸν αὐτὸν τρόπον αἰεὶ πρὸς τὰ τῆς τροφῆς ἀνακτέον συμπααραλαμβάνοντα καὶ τὰ τοῦ ἀέρος. Ἡ γὰρ εὖειλος καὶ ἀπλῶς ἡ εὐδιεινὴ τὰ ἀσθενέστερα ἐκφέρει μᾶλλον ἢ δ' ἐναντία τὰ ἰσχυρά. Καὶ ἡ ἀνύφαμμος δὲ καὶ πηλώδης τὰ ὀλιγότροφα καὶ ξηρὰ καθάπερ τὴν ἀχιλληΐδα· καὶ γὰρ λευκαίνει μᾶλλον ἐκπέττουσα τὰς τροφάς· καὶ φέρει δὲ καὶ τεράμονα τὰ ξηρὰ καὶ τὰ πρόσειλα, πέττει γὰρ ὁ ἥλιος μᾶλλον, ἐν δὲ τοῖς εὐγείοις καὶ πίσιν οὐχ ὁμοίως.

[4] Πυρὸς δὲ κριθῆς ἐν τοῖς ὀμβρώδεσιν εὐθενεῖ μᾶλλον καὶ τὸ ὅλον δὲ πρὸς τὰς ἐπομβρίας ἰσχυρότατος. Φέρει δὲ καὶ ἐν τοῖς ἀκόπροις μᾶλλον· αἴτιον δὲ ὅτι θερμὸς ὢν ἐκπέττειν δύναται μᾶλλον καὶ κόπρον οὐκ ἐπιζητεῖ διὰ τὸ ἔχειν ἐν ἑαυτῷ ὃ ἔδει ἐκ τῆς κόπρου γίνεσθαι καὶ τὸ ὅλον ἰσχυρότατος ἐστὶ καὶ πρωῒσπορεῖται καὶ ἐν τοῖς ψυχροῖς καταβάλλεται μᾶλλον. Ἡ δὲ ἰσχύς θερμότητι καὶ τῷ μᾶλλον πολυχίτωνά ἐστι· δι' ὃ καὶ ἡ διὰ χρόνου γεωργουμένη γῆ πυροὺς φέρει μᾶλλον ἢ κριθάς· κατακρατεῖ γὰρ τῆς τροφῆς ἰσχυροτέρας οὕσης ὁ πυρὸς μᾶλλον. Ἐνιαχοῦ δ' οὐχ ὁμοίως ἐθέλει φέρειν μὴ ἐμπρησθείσης τῆς ὕλης· οὕτως δ' ὥσπερ μανοῦται καὶ κοπρίζεται.

[5] Ὡς δὲ ἀπλῶς εἰπεῖν πάντα ἐν ταύταις μεγίσταις καὶ κοινοτάταις ἐστὶν διαφοραῖς, ἐν τῇ τῆς χώρας φύσει τῇ τῶν σπερμάτων ἰσχυρὰ καὶ ἀσθενεία καὶ ἐν τῇ τοῦ ἀέρος κράσει, δι' ὃ σκεπτέον ταῦτα. Χειμῶνες δὲ ἐπιγινόμενοι πανταχοῦ μὲν χρήσιμοι· ρίζοῦνται γὰρ καὶ καρκινοῦνται μᾶλλον ὥστ' εἰς τὸ ἔαρ σύμμετρον ἀποδίδονται μέγεθος. Μάλιστα δ' ἐν ταῖς ἀγαθαῖς χώραις· τὰ γὰρ νότια καὶ ὅταν εὐδία ταχὺ ἀναδιδόασιν καὶ ποιοῦσιν λοχαίαν καὶ καρπὸν ἐρυσιβώδη. Τὰ δὲ πυκνόσπορα πρότερον ἀποχεῖται τῶν μαυροσπόρων ὅτι τὰ μὲν ρίζοῦνται καὶ εἰς τὰ κάτω σχίζεται διὰ τὸ ἔχειν τόπον τὰ δ' εὐθὺς εἰς τὸ ἄνω τρέχει.

[22.1] Χρὴ δὲ καὶ τὰ οἰκεῖα σπέρματα πρὸς εὐφορίαν καὶ τὰ νοσήματα τὰ συμβαίνοντα λαμβάνειν οἷον ἐρυσίβας· ἐπεὶ ἐν τοῖς κοίλοις καὶ ἀπνόοις γίνεται. (Τὰ ἐρυσιβούμενα, ἐν δὲ τοῖς εὐπνόοις) τὰ μὴ ἐρυσιβούμενα· τοιαῦτα δὲ τὰ ἐπικλινῇ τῷ στάχυϊ καὶ μὴ ὀρθά. Διὰ τοῦτο δὲ καὶ τὸ ἐπικύπτειν συμφέρει τὸν στάχυν ὅπως ἀπορρέῃ καὶ μὴ ἐμμένη τὸ ὕδωρ καὶ ἡ δρόσος. Ἐπικλίνουσι δὲ οἱ μακροὶ στάχυες μᾶλλον οἱ δὲ πλατεῖς καὶ βραχεῖς ὀρθότεροι δι' ὃ καὶ ἐρυσιβοῦνται ταῦτα διωγραινόμενα. Καὶ ὢν ὁ στάχυς ἀπῆρτηται πολὺ τῶν φύλλων· ἐν γὰρ τοῖς φύλλοις ἐμμένει μᾶλλον ἢ ὑγρότης ὥστε πλησίον μὲν ὄντος εὐθὺς ἄπτεται πόρρῳ δὲ οὐχ ὁμοίως.

[2] Δι' ὃ καὶ ἡ μὲν ἀχιλλήϊς κριθὴ καὶ λευκὴ καὶ μέλαινα ἐρυσιβώδης, ὀρθοὶ γὰρ οἱ στάχυες, ἡ δ' ἐτεόκριθος ἀσφαλῆς, ἀπονεύει γάρ. Τὰ δὲ προσήνεμα τῶν χωρίων ἥττον ἐρυσιβοῦνται· διὰ γὰρ τὴν κίνησιν ἀποσειέται καὶ ἀποπίπτει τὸ ὑγρόν. Ἐπεὶ καὶ ὅταν ὕσαντος πνεῦμα ἐπιγένηται καὶ πάλιν ἐπιλαμβάνῃ νύξ ἥττον· τὸ μὲν γὰρ διέσεισεν ὁ δ' ἥλιος (οὐκ) εὐθὺς ἐπιγενόμενος οὐκ ἐποίησε σῆψιν ἀλλ' ἀνεξηράνθη πρότερον. Ἡ δ' ἐρυσίβη σαπρότης τις οὐδὲν δὲ σαπρὸν ἄνευ θερμότητος ἀλλοτρίας. Μάλιστα δὲ ἐρυσιβοῦται σῖτος ταῖς πανσελήνοις διὰ τὸ καὶ τὴν σελήνην τῇ θερμότητι

σῆπιν τῇ ἐαυτῆς. Ἀσθενέστερα δὲ καὶ ἐπικηρότερα πάνθ' ὥς ἀπλῶς εἶπεῖν τὰ λευκὰ τῶν μελάνων καὶ ἐπὶ τῶν φυτῶν ἐστὶ καὶ ἐπὶ τῶν ζώων. Ὅτι μὲν οὖν οἰκεῖα τὰ σπέρματα ταῖς χώραις ληπτέον φανερόν ἐκ πολλῶν.

[3] Νοσήματα δὲ γίνεται πᾶσι τοῖς σπέρμασιν ὥς ἀπλῶς εἶπεῖν διὰ τὴν ἀσυμμετρίαν τῆς τροφῆς τε καὶ τοῦ περιέχοντος ἀέρος ὅταν ἢ μὲν πλείων ἢ δὲ ἐλάττω ὁ δὲ κάτομβρος ἢ κατάξηρος ἄγαν ἢ μὴ κατὰ καιρὸν ἀνυγραινόμενος τύχῃ· τότε γὰρ καὶ οἱ σκώληκες ἐγγίνονται τοῖς ὄχροις καὶ τοῖς λαθύροις καὶ τοῖς πισοῖς καὶ αἱ κάμπαι τοῖς ἐρεβίνθοις ὅταν οἱ μὲν ἀνυγρανθῶσι καὶ μεταξὺ ἐγγίνονται θερμημερίαι· τῶν δὲ ἐρεβίνθων ὅταν ἢ ἄλμη κατακλυσθῇ καὶ ἀναγλυκανθῶσι· πανταχοῦ γὰρ ἡ φύσις ζωογονεῖ μισαμένη πως τῇ ὑγρότητι τὸ θερμὸν καθάπερ ὕλην οὖσαν τὴν ὑγρότητα τῷ θερμῷ πρὸς τὴν σῆψιν.

[4] Ὁ καὶ ἐπὶ τῶν πυρῶν συμβαίνει κατὰ τοὺς σκώληκας· γίνονται γὰρ ἐν ταῖς ρίζαις ὅταν νότια πλείω μετὰ τοὺς σπόρους ἐπιγένηται· τότε γὰρ ἀνυγραινόμενης τῆς ρίζης καὶ τοῦ ἀέρος ὄντος θερμοῦ ζωοποιεῖ πως ἡ θερμότης συσσήπουσα τὴν ρίζαν, ὁ δὲ γενόμενος εὐθὺς κατεσθίει. Πέφυκε γὰρ ἐκ τῶν αὐτῶν ἐκάστοις ἡ γένεσις καὶ ἡ τροφή. Ἐτερος δ' ὅταν ἀποχυθῇ διὰ τὸν ἀχμὸν μὴ δύνηται τὸ ἐγκατακλειόμενον ὑγρὸν ὑπὸ τοῦ θερμοῦ σήψεως γινομένης ἐξωποίησεν, εἴθ' ὁμοίως ἡ τροφή διὰ τοῦ αὐτοῦ.

[5] Ταῦτο δ' ἔοικε τοῦτο καὶ ἐπὶ τῶν μηλέων καὶ ὅλως ἐπὶ τῶν δένδρων συμβαίνειν ὅσα σκωληκοῦνται διψήσαντα· διὰ γὰρ τὸ ὀλίγον εἶναι τὸ ὑγρὸν καὶ μένειν ἐν τῷ δένδρῳ θερμαινόμενον σῆψιν ἐποίησεν ἐξ ὧν ὁ σκώληξ. Σημεῖον δὲ ὅταν ἄφθονος ἡ τροφή γίνηται· τότε γὰρ καὶ ἡ ἐπιρροή πρὸς τὰ ἄνω διαδίδεται καὶ πλείων οὖσα κατακρατεῖ καὶ οὐ σῆπεται. Παραπλήσιον δὲ τὸ συμβαῖνόν ἐστὶ καὶ τῇ ἀμπέλῳ· καὶ γὰρ ἐν ταύτῃ τοῖς νοτίοις οἱ ἵπες γίνονται μᾶλλον ἅτε διυγραινόμενης καὶ τοῦ ἀέρος γονεύοντος· εἴτ' εὐθὺς ἐξεσθίουσι τὸ ὁμογενές.

[6] Ὡσαύτως δὲ καὶ ἐπὶ τῶν ἐλαῶν αἱ κάμπαι καὶ ἐφ' ὧν ἄλλα ἐγγίνεται ζῶα περὶ τὴν βλάστησιν ἢ τὴν ἄνθησιν ἢ καὶ ὕστερον· πάντα γὰρ ἐκ παραπλησίας αἰτίας ἐστὶ συνιστάμενα. Τῇ δ' ἀμπέλῳ μάλιστα τοῦτο συμβαίνει δι' ὅτι φύσει ὑγρὸν ἐστὶ καὶ ἡ ὑγρότης αὐτῆς ἄχυλος καὶ ὕδατώδης· εὐπαθεστάτη γὰρ ἡ τοιαύτη. Ἐνιαχοῦ δὲ οὐ γίνονται τὸ ὅλον ἵπες ὅταν εὐπνοὺς τε καὶ μὴ ἐνυγρός μὴδ' εὐτροφὸς ὁ τόπος ὑπάρχῃ. Καὶ περὶ μὲν νοσημάτων ἐν τοῖς ὕστερον ἐπὶ πλέον ῥητέον.

[23.1] Σπεῖρειν δὲ κελεύουσιν οἱ μὲν πρὸ πλειάδος· ξηρὰν γὰρ ἄνικμόν τε οὖσαν διαφυλάττειν τὸ σπέρμα τὴν γῆν. Οἱ δ' ἅμα πλειάσι δυομέναις ὥσπερ

καὶ Κλείδημος· ἐπιγίνεσθαι γὰρ ὕδατα τὰ πολλὰ τῇ ἐβδόμῃ μετὰ τὴν δύσιν. Ἄριστον δὲ ἴσως καὶ ἀσφαλέστατον εἰς ὀργῶσαν τὴν γῆν ἐμβληθῆναι εὐλαβούμενον ὅπως μὴτ' ἐμβληθῇ πηλῷ μὴτ' (εἰς) ἡμιβρεχὴ καὶ ἡμίειλον ἦν δὴ καλοῦσί τινες ἀμφιεργον. Ἡ μὲν γὰρ ὑγρὰ καὶ πηλώδης διαχεῖ καὶ ἐκγαλακτοῖ καὶ ἐὰν ξηρανθῇ συναλείφει καὶ οὐ διαδίδωσιν, ἡ δὲ ἡμιβρεχὴς κατασῆπει· τοσοῦτον γὰρ ἔχει τὸ θερμὸν καὶ τὸ ὑγρὸν ὥστε κινῆσαι μὲν μὴ ἐκβιάσασθαι δὲ μὴδ' ἐκβλαστεῖν.

[2] Καὶ χεῖριστος οὗτος τῶν σπόρων. Ὁ γὰρ ἐν ξηρᾷ σπόρος γινόμενος καθ' ὥραν ἔτους οὐκ ἀπόλλυσι τὸ σπέρμα· τοὺς δὲ περὶ τροπὰς σπόρους Κλείδημός φησιν ἐπισφαλεῖς εἶναι· διερὰν γὰρ οὖσαν καὶ βαρεῖαν τὴν γῆν ἀτμιδῶδη γίνεσθαι καὶ εἰκέναι ἐρίοις κακῶς ἐξαμμένοις· ἔτι δ' οὐ δύνασθαι τὰς ἀτμίδας ἔλκειν οὐδὲ διαπέμπειν ἅτε θερμὸν οὐκ ἔχουσαν ἱκανὸν καὶ ἐπαλείφειν ἔλαττον. Ἀλλὰ τὰ ὅψια δεῖ σπεῖρειν ὑπὸ τροπᾶς.

[3] Συμφέρει δὲ σπειρομένοις καὶ σπαρεῖσιν εὐδίας ἐπιγίνεσθαι πλείους ἡμέρας ὅπως διαβλαστῶσι, μετὰ δὲ ταῦτα ψύχη βόρεια καὶ μέτρια λεπτὰ χειμῶνος ἰσχυρῶς ἐρριζωμένων ἤδη καὶ ταρρουμένων· ἀνθέξουσιν γὰρ μᾶλλον· ἐπεὶ πιλούμενά γε βελτίω καὶ ἐγκαρπότερα. Τῆς γὰρ ρίζας ἰσχυούσης ἢ τε τροφὴ πλείων καὶ ἢ αὐξήσις μετὰ ταῦτα θάττον· τὰ γὰρ εὐθύς ἀνατρέχοντα λεπτὰ καὶ ἀσθενῇ γίνεται καὶ ἅμα πρὸ τῆς ὥρας κυϊσκόμενα καὶ ἀποχεόμενα φθείρεται. Τὸ γὰρ ὅλον ἢ πάρωρος εὐτροφία σφαλερὰ δι' ὃ καὶ ἐπιτέμνουσιν οἱ δὲ κείρουσιν.

[4] Ἀγαθὸν δὲ καὶ ἡ χιὼν ὅτι ἀναζυμοῖ καὶ μανοῖ τὴν γῆν καὶ τροφήν τε παρέχει καὶ ἐγκατακλείουσα τὸ θερμὸν αὖξιν τε καὶ ἰσχύειν ποιεῖ τὴν ρίζαν. Ἡ καὶ τὸ ἀπορούμενον οὐκ ἀφανὲς διὰ τί αἱ ψυχεῖναι χῶραι καὶ αἱ θερμαὶ σιτοφόροι καθάπερ ἡ Θράκη καὶ ὁ Πόντος καὶ ἡ Λιβύη καὶ ἡ Αἴγυπτος. Πρὸς γὰρ τοῖς ἄλλοις ποιεῖ τι ὁ χειμὼν καὶ τὰ καύματα καθάπερ ἐν ταῖς ἐργασίαις ἐλέχθη τῆς γῆς. Οὐδὲν δὲ ἔλαττον ἀλλὰ πάντων μέγιστον ὁ περιέχων ἀὴρ πρὸς εὐκαιρίας ὑδάτων καὶ βίας χειμῶνων καὶ πνευμάτων. Ὅποια γὰρ ἂν ἦ ταῦτα καὶ τὰ σπέρματα οὕτως ἐκτελεῖται ὃ καὶ ἡ παροιμία καλῶς “ἔτος φέρει οὔτι ἄρουρα.”

[5] Μέγα δὲ καὶ ἡ θέσις τῆς χώρας ἢ πρὸς τὰ πνεύματα καὶ τὸν ἥλιον ὥσπερ καὶ ἐπὶ τῶν δένδρων ἐλέχθη· πολλὰ γὰρ οὔσαι λεπταὶ καὶ φαῦλαι τελέσφοροι γίνονται διὰ τὸ πρὸς ταῦτα κεῖσθαι καλῶς. Ὡς δ' ἀπλῶς εἰπεῖν ἡ ἀγαθὴ χῶρα καὶ χειμῶνων δεῖται πολλῶν· ἂν γὰρ εὐδαίαι καὶ τὰ νότια ἐνισχύωσι λοχαίους ποιοῦσιν ὥς ἐπὶ τὸ πολὺ καὶ ἐρυσιβώδεις. Ὁ δὲ χειμὼν πιλώσας καὶ

καρκινώσας τὰς ρίζας σύμμετρον εἰς τὸ ἔαρ ποιεῖ τὸ μέγεθος ὅλως δὲ καὶ τὴν χώραν ἂν εἰργασμένην λάβῃ μανοῖ. Διὰ ταύτην δὲ τὴν αἰτίαν καὶ εἰς τὸ ἔαρ αἱ αὐξήσεις ταχεῖαι γίνονται καὶ ἐκφύσεις καὶ τελειώσεις ὥστε δοκεῖν μὴ κατὰ λόγον ἀπολείπεσθαι τῶν ἐν ταῖς ἀλειναῖς ἀλλὰ καὶ προτερεῖν ὥσπερ καὶ τὰ περὶ Ἑλλάσποντον. Ἰσχυρᾶς γὰρ τῆς ὀρμῆς γενομένης διὰ τὸν ἀθροισμὸν καὶ τοῦ ἀέρος ὑπηρετοῦντος ταχεῖαι καὶ αἱ ἐπιδόσεις καὶ αἱ τελειώσεις γίνονται. Ταῦτα μὲν οὖν ἐν ταῖς τῆς χώρας διαφοραῖς ἐστί.

[2.4.1] Τὰ δὲ σπέρματα καθάπερ ἐπὶ τῶν δένδρων ἐκ τῶν ὁμοίων ἢ τῶν χειρόνων ληπτέον ὅπως δὴ μηδεμία μεταβολή, ἢ ἐπὶ τὸ βέλτιον γίνηται. Καίτοι φασὶν ἐκ τῆς ἀγαθῆς ἰσχυρότερα εἶναι δι' ὃ καὶ ἐπὶ δύο ἔτη διαμένειν τὴν δύναμιν. Εἰ δὲ τοῦτο ἀληθὲς ὅμοιον ἂν εἴη καὶ τὸ ἐπὶ τῶν φυτευμάτων τὸ τὰ κάλλιστα καὶ ἰσχυρότατα λαμβάνειν ὥστ' ἀμφοτέρως ἂν ἔχοι λόγον.

[2] Χρὴ δὲ καὶ ταῖς τοῦ ἀέρος ἀνωμαλίαις προσέχειν. Οὔτε γὰρ τὰ ἐκ τῶν εὐείλων καὶ πρωίνων εἰς τοὺς ὀψίους καὶ διαχειμέρους οὔτε τὰ ἐκ τούτων εἰς ἐκείνους ἀρμόττει. Τὰ μὲν γὰρ προτερεῖν δοκεῖ τὰ δ' ὑστερεῖν ὥστε τὰ μὲν ὑπὸ χειμῶνος τὰ δ' ὑπ' αὐχμῶν ἀπόλλυται καὶ ἀνυδρίας· ὅψια γὰρ ὄντα βραδέως τε κύσκεται καὶ ἀποτίκτει δι' ὃ καὶ ὑστερεῖ. Ταῦτο δὲ τοῦτο συμβαίνει καὶ ἐπὶ τῶν σπερμάτων ὅσαπερ εὐβλαστεῖ καὶ ταχὺ παραγίνεται καθάπερ τὰ τριμηνιαῖα.

[3] Σπαρέντα γὰρ πρώϊα προτερεῖ καιρῶν εἰ μὴ τι τοιοῦτον ὥστε προλαβεῖν τοὺς χειμῶνας πρὸς τὴν ρίζωσιν ὥσπερ καὶ τὸν κύαμον διὰ τοῦτο πρωῒσποροῦσι καὶ ἅμα διὰ τὸ φιλεῖν ἀνθοῦντα βρέχεσθαι καὶ ἀπανθεῖν πολὺν χρόνον· ὁψὲ γὰρ σπειρόμενος οὐκ ἂν βρέχοιτο. Τὸ δὲ ὕδωρ ἐν τῷ ἀνθεῖν τούτῳ μὲν συμφέρει διὰ τὴν μανότητα, τῷ σίτῳ δὲ ἀσύμφορον διὰ τὴν λεχθεῖσαν πρότερον αἰτίαν, τοῖς δὲ ἄλλοις χεδροποῖς ἀβλαβὲς πλὴν ἐρεβίνθῳ, τοῦτον δὲ ἀπολλύει· καταπλυθείσης γὰρ τῆς ἄλμης ὥσπερ συμφύτου τινὸς στερόμενος σφακελίζει τε καὶ ὑπὸ καμπῶν κατεσθίεται· ζωογονεῖται γὰρ ὥσπερ εἴρηται.

[4] Βραχέντος δὲ οἴνῳ τοῦ σπέρματος ἦττον δοκεῖ νοσεῖν, ὅπερ οὐκ ἄλογον ἔχοντά τινα δριμύτητα· διατηροῦσι γὰρ αὐται. Τὸ γὰρ ὅλον ἐάν τις ἀλλοιώσας μεταβάλλῃ τὸ σπέρμα καθάπερ πρότερον ἐλέγχθη μεταβάλλειν καὶ τὰ φυτὰ καὶ τοὺς καρποὺς οὐκ ἄλογον· οἷα γὰρ ἡ ἀρχὴ τοιαῦτα καὶ τὰ ἀπὸ τῆς ἀρχῆς. Ἔτι δ' ὁρῶμεν ὅτι καὶ ταῖς τροφαῖς ἀλλοιούμενα μεταβάλλει καὶ ὅλα γένη τῶν δένδρων ὥσπερ ἐξ ἀγρίων ἡμερα γινόμενα καὶ ἐκ μελάνων λευκά· καὶ κατὰ τοὺς καρποὺς ὁμοίως ὥστε καὶ πρὶν πεσεῖν αὐτὸ ποιόν τι γινόμενον οὐκ

ἄτοπον ἀλλοιοῦν καὶ τὴν ρίζαν εὐθὺς καὶ τὸν καυλὸν καὶ τὸν καρπὸν.
Ἀπηνθηκότος δ' οὐ συμφέρει κατὰ μικρὸν ἐφύειν οὐδ' ἥλιον ἐπιλαμβάνειν
ἀλλὰ ψύχη γίνεσθαι καὶ ἐπινεφεῖν ὅπως μὴ ἐπικαθήμενον τὸ ὕδωρ ἐπιλαβὼν ὁ
ἥλιος ἐρυσιβώση σῆψιν ποιήσας. Δι' ὃ καὶ αἱ δροσοβόλοι χῶραι καὶ ἔγκοιλοι
καὶ ἀπνεύματοι μάλιστα ἐρυσιβώδεις.

Liber IV

[1] Ἐπειδὴ πλείους αἱ γενέσεις τῶν φυτῶν τούτων δὲ κοινοτάτη πᾶσιν ἢ ἀπὸ σπέρματος ἐστὶν ὅσα ἔχει σπέρμα καὶ καρπὸν, ἀπορήσειεν ἂν τις διὰ τί ποτε οὐκ ἀνὰ λόγον ἢ ἰσχὺς ἐκάστῳ ἐστὶ τῶν σπερμάτων ἀλλ' ἀσθενεστέρα τῶν ἰσχυροτέρων οἷον τὰ τῶν δένδρων τῶν ἐπετείων. Ἀμφοτέρως γὰρ φαίνεται τὸ ὁμολογούμενον· καὶ εἰ ἀπὸ τῶν ἀσθενεστέρων ἰσχυρότερα (τὰ) γινόμενα· τὰ γὰρ σπέρματα γεννᾷ τὰ δένδρα· τῆς δὲ ἀσθενείας καὶ τῆς ἰσχύος ἐκεῖνα σημεῖα· τὰ μὲν γὰρ ἐπέτεια ὅταν σπαρῇ διαμένει τὰ αὐτὰ καὶ ἐξομοιοῖ τοὺς καρποὺς τὰ δὲ τῶν δένδρων μεταβάλλει καὶ χεῖρω ποιεῖ, καὶ τὰ μὲν ταχεῖαν ἀποδίδωσι τὴν τελείωσιν τὰ δὲ χρόνιον καὶ βραδεῖαν.

[2] Καὶ ἀνάπαλιν δὲ λαμβανομένων· ἰσχυρότερα γὰρ ὄντα τὰ δένδρα βραδύτερον ἐκπέττει τοὺς καρποὺς. Ἔτι δὲ τὰ μὲν ἐν κελύφεσι δερματικοῖς καὶ ξυλῳδεσιν· τὰ δ' αὐτὰ πάλιν ἐν περικαρπίοις σαρκῳδεσιν οἷον τὸ τῆς ἐλάας καὶ τὸ τῆς κοκκυμηλέας καὶ τὰ τῆς ἀπίου καὶ ἀμπέλου καὶ μηλέας· ἕνια δ' ἐν ξυλῳδεσιν ἅμα καὶ σαρκῳδεσιν καὶ ὅλως ὅσα κάρυον ἐντὸς ἔχει τῆς σαρκός. Τὰ δὲ τοῦ σίτου γυμνὰ καὶ μάλιστα τοῦ πυροῦ καὶ τῆς κριθῆς, εἰ δὲ μὴ χιτῳσί γε περιέχεται λεπτοῖς. Ἀεὶ δὲ τὸ ἀσθενέστερον ἢ φύσις εἰς πλείω τίθεται φυλακὴν. Αἱ μὲν οὖν ἀπορίαι σχεδὸν τοιαῦται.

[3] Δεῖ δὲ λαβεῖν πρὸς αὐτὰς ἀρχὴν τήνδε, τὸ σπέρμα μὴ μόνον ἔχειν δύναμιν τοῦ ποιεῖν ἀλλὰ καὶ τοῦ πάσχειν, ὅπερ καὶ κατὰ πάντων τῶν τῆς φύσεως ἀληθές, καὶ κατ' αὐτὴν δὲ τὴν γένεσιν ἀμφοῖν εἶναι τὴν ἐνέργειαν καὶ τρόπον τινὰ οὐχ ἥττον τοῦ πάσχειν· τότε γὰρ καὶ ἡ ἐν τοῖς σπέρμασι κινεῖται δύναμις οἷον διαθερμαινομένων. Δι' ὃ καὶ οὐ πάντα βλαστάνει κατὰ τὴν αὐτὴν αἰτίαν ἀλλ' ὅταν ἡ οἰκεία τοῦ ἀέρος κατάσχη κράσις. Ὑποκειμένου δὲ τούτου φανερόν ὡς οὐκ ἰσχύος ἀλλ' ἀσθενείας μᾶλλον ἢ ταχυβλαστία· τὸ γὰρ ἀσθενές εὐπαθέστερον. Δι' ὃ καὶ τὰ εὐπαθέστερα ἐπέτει ταχυβλαστότερα καὶ ἅμα τὸ κοινὸν αὐτοῖς ὥσπερ ἕτερον εἰς τὸ παθεῖν.

[4] Ὁ δ' αὐτὸς λόγος καὶ περὶ τῆς τελειώσεως, τὰ ἀσθενέστερα ῥᾶον ἐκτελεώσασθαι καὶ τῷ περιέχοντι καὶ ταῖς ἐν αὐτοῖς ἀρχαῖς. Ὁ καὶ περὶ ζώων ἐστίν· αἰεὶ γὰρ τὰ ἰσχυρότερα χρονιωτέρας ὡς ἐπὶ πᾶν ποιεῖται καὶ τὰς κυήσεις καὶ τὰς τροφάς. Ἄμα δ' [ὥσπερ ἐάν] τὰ μὲν αὐτοῦ τοῦ [χειμῶνος] σπέρματος γεννητικὰ σώματα [οὐ δὲ] μικρὰ ὑπόκειται, τὰ δὲ ἐν ὄγκοις μεῖζουσιν οἱ καταναλίσκουσι καὶ ἀντισπῶσιν εἰς ἑαυτοὺς τὰς τροφὰς ὥστε τὰ μὲν ὀλιγόκαρπα τὰ δὲ ὅλως ἄκαρπα ποιεῖν ὡς ἐπὶ τῶν ζώων συμβαίνει τῶν

ἐκπαχυνομένων καὶ εὐτροφουμένων.

[5] Τοῦ μὲν οὖν θάττον ἐκτελεοῦν οὐχ ἡ ἰσχύς ἀλλὰ ταῦτα τὰ αἷτια, δι' ὃ καὶ πολυγονώτερα. Καίτοι τάχ' ἂν τις ἀντείποι περὶ τοῦ πλήθους φάσκων πλείω τὰ ἀπὸ τῶν δένδρων εἶναι. Πολλὰ γὰρ ἕκαστον ἔχειν τῶν περικαρπίων τὸ δὲ δένδρον ἀφ' ἐνὸς γεγενῆσθαι σπέρματος. Ἀλλὰ ταῦτα μὲν ἐλαφρότερα καὶ οἷον ἀπηρτημένα ἂν φανείη. Τὸ δὲ μὴ δύνασθαι τηρεῖν τὰ γένη μὴδ' ἐξομοιοῦν ἐν ἀμφοῖν ἂν ἔχοι τὸ αἷτιον, καὶ τῷ πλείω χρόνον τὰ κατὰ γῆς μᾶλλον κατακρατεῖσθαι καὶ τῷ τοὺς σωματικούς ὄγκους ἀντισπᾶν.

[6] Ὁ γοῦν καὶ τῆς ἀκαρπίας αἷτιον καὶ τῆς κακοκαρπίας εὐλόγως, φανερόν δὲ μάλιστα ἐκ τῶν ἀμυγδαλῶν, εἶπερ ἀφαιρουμένης τῆς ὑγρότητος καὶ τῆς εὐτροφίας μεταβάλλουσι. Τὰ δ' ἐπέτεια βραχύν τινα χρόνον ἐν τῇ γῇ γίνεται καὶ ὀλίγην ἔλκει τροφήν δι' ὃ καὶ οὐκ ἐξίσταται μᾶ σπορᾷ τῶν γενῶν, ἀλλ' εἰ τῇ τρίτῃ, τότε γὰρ ποιεῖται τὴν μεταβολήν· ὥσθ' ὅπερ ἐκείνοις διὰ τὸ πλήθος τῆς τροφῆς εὐθὺς τοῦτο τοῖς σπέρμασι χρονισθεῖσι κατὰ λόγον· πλὴν ὅτι τὰ μὲν εἰς τὸ χειρόν ἀεὶ μεταβάλλει τὰ δὲ καὶ ἐπὶ τὸ βέλτιον ἐὰν ἡ χώρα τοιάδε καὶ ὁ ἀήρ· ἀλλὰ δὴ τοῦτο μὲν ἕτερον.

[7] Εἰς ἄλλο δ' ἐξίσταται γένος μάλιστα τῶν σπερμάτων τὰ ἰσχυρότερα καθάπερ ὁ πυρὸς καὶ ἡ κριθὴ· μόνα γὰρ ἐξαιροῦνται· μᾶλλον δ' ὁ πυρὸς ἰσχυρότερον ὄν. Ὡστε καὶ τοῦτο ὁμολογούμενον τῷ πλείω τροφήν ἔλκειν. Ὁ γὰρ θερμός ὥσπερ ἅπεπτόν τι τὸ ὅλον.

[2.1] Τὰ μὲν οὖν κατὰ τὴν βλάστησιν ἐν τούτοις ἂν εἴη. Πρὸς δὲ τὴν ἐξω διαμονὴν φυλαττομένων ἄλλοις μὲν ἄλλως συμβαίνει κατὰ τοὺς χρόνους. Οὐ μὴν ἄλλ' οὐδ' ἄλογον ἔνια προτερεῖν τῶν δενδρικῶν εἰς τὴν φθορὰν οἷον ὅσα ἐν περικαρπίοις ἐστὶ σαρκώδεσιν [οἷον] ὅταν χωρισθῇ καὶ σαπῇ· γυμνούμενα γὰρ ἀναξηραίνεται καὶ θνήσκει· τὰ δὲ ἐν δερματικοῖς καὶ μὴ χωριζόμενα· καὶ γὰρ ὑγρότερα καὶ παρεισδέχεται τὸν ἀέρα. Μάλιστα δὲ διαμένει τὰ ἐν ξυλώδεσι καὶ τούτων ὅσα πυκνόν τε τὸ κέλυφος ἔχει καὶ αὐτὰ λιπαρὰ καθάπερ τὰ κάρυα τὰ ἥρακλεωτικά, πλὴν ἐκπικροῦται· τὰ δ' ἀμύγδαλα ἐλάττω χρόνον· ἐλάχιστον δὲ τὰ βασιλικά μένει, μανότατον γὰρ τὸ πέριξ καὶ ἥκιστα συμφύες. Διαμένει δὲ καὶ τὸ τῆς ἐλάας καὶ εἴ τι ἄλλο τοιοῦτον· τῶν δ' ἐν σαρκώδεσι περικαρπίοις χρονιώτατον τὸ τοῦ φοίνικος ἅτε ξηρότατον ὄν καὶ πυκνόν.

[2] Τὰ μὲν οὖν τῶν δένδρων διὰ ταύτας τὰς αἰτίας τὰ μὲν μᾶλλον τὰ δ' ἤττον διαμένει. Σχεδὸν δὲ καὶ τὰ τῶν σιτωδῶν διὰ παραπλησίας αἰτίας. Ἡ γὰρ τῷ περιέχεσθαι πλείοσι χιτῶσιν ἢ διαμονὴ καθάπερ ὁ κέγχρος, ἢ τῷ λίπος

ἔχειν ὥσπερ τὸ σήσαμον ἢ τῷ δριμύτητά τινα καὶ πικρότητα χυλοῦ καθάπερ ὁ θερμός καὶ ὁ ἐρέβινθος καὶ ὁ ὄροβος· μόνα γὰρ δὴ καὶ οὐ ζωοῦται τῶν χεδροπῶν ὁ θερμός καὶ ὁ ἐρέβινθος· ἀλλ' ὁ γε ἐρέβινθος μέλας γίνεται διαφθειρόμενος. Ὁ δὲ πυρὸς μᾶλλον τῆς κριθῆς καὶ τῶν χεδροπῶν διὰ τὸ θερμότερον εἶναι καὶ χιτῶνας ἔχειν πλείους· ἡ γὰρ [αὖ] κριθὴ καθάπερ γυμνόν. Τὰ δὲ χεδροπὰ παχέα μὲν τοῖς κελύφεσιν ἀλλὰ μανὰ καὶ γλυκύτητά τινα ἔχοντα φαίνεται· οὐχ ἦττον δ' αἷτια ταῦτα τῆς φθορᾶς. Δι' ὃ καὶ ὁ κύαμος καὶ ὁ ὄχρος τάχιστα κόπτεται.

[3] Τάχα δ' ἀληθέστερον εἰπεῖν ὡς κατὰ τὰς χώρας· ἐν Ἀπολλωνίᾳ γοῦν τῇ περὶ τὸν Ἴόνιον πολλὰ φασιν ἔτη διαμένειν τοὺς κυάμους, πολλὰ δὲ καὶ περὶ Κύζικον. Ἀλλὰ περὶ μὲν τῆς τούτων διαμονῆς καὶ τὸ ὅλον τῆς φύσεως τάχ' ἂν ἐν τοῖς ὕστερον ἐπὶ πλέον ῥηθεῖν· πρὸς δὲ τὰ τῶν δένδρων συγκρινόμενα ταύτας ἔχει τὰς διαφοράς.

[3.1] Ἐν δὲ τοῖς τῶν λαχανωδῶν τὰ μὲν ἄλλα τὴν ἐξομοίωσιν ἀποδίδωσι, ῥάφανος δὲ καὶ μαλάχη δοκεῖ παραλλάττειν καὶ δενδρικώτερα· τὰς δ' ἐκφύσεις πλέον ἀλλήλων ἔτι ταῦτα παραλλάττει τῶν σιτηρῶν. Τὰ μὲν γὰρ τριταῖα διαβλαστάνει καθάπερ ὄκιμον, σίκυος, κολοκύντη, τὰ δὲ πεμπταῖα ἢ ἐκταῖα, τὰ δὲ πεντεκαίδεκαταῖα καθάπερ πράσον, τὸ δὲ σέλινον τεσσαρακοσταῖον ἐνιαχοῦ δὲ πεντηκοσταῖον, δυσφυέστατον γὰρ τοῦτο πάντων. Δυσφυές δὲ καὶ τὸ κορίαννον, οὐ γὰρ βλαστάνει μὴ βρεχθὲν, αἷτια δ' ἡ σκληρότης, ὥσπερ γὰρ ξυλῶδές ἐστι τὸ περιέχον.

[2] Ἡ δὲ τῶν τευτλίων ἀνωμαλία τῷ τὰ μὲν ὕστερον μηνὶ ἐκβλαστάνειν τὰ δὲ δυοῖν τὰ δὲ πλείοσι τὰ δὲ καὶ ἐνιαυτῷ σημαίνειν ἔοικε τῶν σπερμάτων αὐτῶν ἀτεραμυνότητά τινα πρὸς τὴν βλάστησιν. Τὰ δὲ θερινὰ σπειρόμενα δῆλον ὡς δι' ἀσθένειαν· δι' ὃ ταχύ τε παραγίνεται καὶ ταύτην τὴν ὥραν φύεται φέρειν οὐ δυνάμενα τὸν χειμῶνα, τὰ μὲν ὄντα ξηρὰ καθάπερ καὶ τὸ ὄκιμον τὰ δ' ὑγρὰ καὶ ψυχρὰ καθάπερ ὁ σίκυος καὶ ἡ ἀνδράχνη. Θαυμαστὸν δ' ἂν δόξειε τὸ τοῦ ἄβροτόνου μάλιστα δι' ὅτι θερμὸν ὄν τὴν ἀλέαν διώκει· αἷτια δὲ ἡ ἀσθένεια· πρὸς ἅμφω γὰρ ἀσθενεῖ καὶ πρὸς τοὺς χειμῶνας καὶ πρὸς τὰ καύματα.

[3] Τὸ δ' ὅλον οὐ ποιεῖ ἡ θερμότης μάλιστα εὐβλαστεῖν εἴπερ θερμὰ τὰ δριμέα· καὶ γὰρ τὸ πράσον καὶ τὸ γήτειον καὶ ἔτι μᾶλλον ἡ θύμβρα καὶ ἡ ὀρίγανος δυσβλαστῇ· δεῖ γὰρ ἔχειν τινὰ ὑγρότητα καὶ οὐχ ἦττον ἀλλὰ μᾶλλον ἴσως εὐκρασίαν τὸ εὐβλαστὲς πρὸς τὸ ποιεῖν καὶ πάσχειν. Ὅλως δ' ὡς ἐν γένει λαβεῖν ξηρότατα τῶν σπερμάτων τὰ στεφανωματικὰ καὶ τὰ τῶν

λαχάνων ὅθεν καὶ τάχιστα τὰς ἱκμάδας ἔλκει· δι' ὃ καὶ κρεμαννύουσιν αὐτὰ καὶ οὐ ραίνουσι τὰ οἰκήματα οὐδ' ὕδωρ εἰσφέρουσιν ὅλως.

[4] Ἡ δὲ διαμονὴ θησαυριζομένων πρὸς τε τοὺς σπόρους καὶ πρὸς τὰς ἄλλας χρείας παραπλησία καὶ τοῖς σιτηροῖς, γόνιμα μὲν εἰς τετραετίαν μάλιστα χρήσιμα δὲ πρὸς τὰλλα πλείω χρόνον ὥσπερ ὁ σῖτος εἰς τροφήν. Καὶ τοῦτο δὲ καὶ κατὰ λόγον ὥσπερ καὶ τοῖς ζώοις πρῶτον ἀπολιπεῖν τὴν τῆς γονῆς (δύναμιν). Καὶ γὰρ ἐν τούτοις ἡ ἀρχὴ τοῦ γεννᾶν ὅπερ ἂν τις ὡς σπέρμα θεῖη τὸ δὲ λοιπὸν ὡς τροφήν καὶ ὕλην προσηρτημένην· ἀλλὰ τὸ ὅλον καλεῖται σπέρμα δι' ὃ καὶ ζῆν αὐτά φασι καὶ μὴ ζῆν ὅταν διαμένη ταύτῃ ἢ φθαρῇ καθάπερ καὶ τὰ ὡά· συμβαίνει δὲ [καὶ] τοῦτο καὶ τοῖς βαλανώδεσι καὶ τοῖς ἄλλοις. Εἰς βλάστησιν δὲ τὰ ἓνα τῶν νέων οὐκ ἄλογον εἶναι βελτίω, ξυνεστηκότα τε καὶ οἷον αὐτὰ αὐτῶν ὄντα μᾶλλον. Πρόσεστι γὰρ τις καὶ τούτων πέψις ἀποπνεύσαντος τοῦ ἀλλοτρίου· χρονιζομένου δὲ πάλιν γῆρας καὶ φθίσις.

[5] Περὶ δὲ τοῦ ἐκκαυλεῖν τάχιστα μὲν τὰ ἀπὸ τῶν ἀκμαζόντων ὡς ἰσχυροτάτων, τελέωσις γάρ τις ἢ ἐκκαύλησις εἴπερ ὁ καρπὸς ὡς τέλος, οὐκ ἄλογον. Δευτέρα δὲ ἐκ τῶν παλαιότερων, καὶ γὰρ ἐκ τούτων οἷον καθαρωτέρα τις καὶ πλείων ἢ δύναμις. Ἐν δὲ τοῖς νέοις ἀναμεμιγμένη καὶ τὸ πλεόν εἰς τὴν τροφήν ἄγουσα καθάπερ ἐν τοῖς ἄλλοις· αἰεὶ γὰρ ὀψιαίτερα τὰ πολύτροφα· δι' ὃ καὶ εἰ μὴ τὰ ἀπὸ τῶν ἀκμαζόντων ἐκκαυλεῖ πρῶτα ἀλλὰ τὰ ἀπὸ τῶν παλαιότερων οὐκ ἄλογον.

[6] Περὶ οὗ δὴ καὶ ἀντιλέγουσί τινες. Ἐκκαυλεῖν γάρ φασι τὰ ἀσθενέστερα μᾶλλον ὥσπερ ἐπὶ τῶν λαχάνων. Αἴτιον δὲ ὅτι εὐπαθέστερά τε καὶ ἐλάττω τροφήν ἔχοντα τελειοῖ τὸ δὲ ἐκκαυλεῖν ὥσπερ τελέωσις, δι' ὃ καὶ τῶν δένδρων τὰ πρεσβύτερα θᾶπτον πέττει καὶ μᾶλλον τοὺς καρποὺς, τὰ δὲ ἐν ἀκμῇ πλείους μὲν καὶ καλλίους ἔχει βραδύτερον δέ. Φαίνεται δ' οὖν εἰ τοῦτο ἀληθές ὅτι ταχυγονώτερα τὰ παλαιότερα. Μεμίχθαι γάρ τις ἐν τοῖς σπέρμασι δοκεῖ οἷον ὕλη καὶ τροφή ταῖς ἀρχαῖς ἦν δεῖ προκατειργάσθαι πρότερον ἢ εἰς τὴν βλάστησιν ἔλθεῖν.

[7] Εἴη δ' ἂν κάκεῖνο λέγειν πρὸς γε τὸ ἐκκαυλεῖν ὡς ἦττον ρίζουμένων τῶν παλαιῶν εἰς δὲ τὸ ἄνω μᾶλλον φερομένων ταχεῖαν ποιεῖ τὴν τελείωσιν ὥσπερ σχεδὸν καὶ ἐπὶ τῶν ὀλιγοχρονίων πάντων ἐστὶ καθάπερ καὶ ἐπὶ τριμήνων λέγεται. Τοὺς δὲ χρόνους δηλὸν ὅτι ταὶ τὰς ἀκμὰς κατὰ τὰς φύσεις ἐκάστων ληπτέον. Ἀλλὰ γὰρ ταῦτα μὲν ὁμοιότητά τινα ἔχει. Τὰ δ' ἴδια καθ' ἕκαστον γένος αὐτὰ καθ' ἑαυτὰ λέγουσιν ἐπὶ πλεόν. Ῥητέον δὲ τοῖς τῶν δένδρων καὶ

πρὸς αὐτὰ καὶ πρὸς τὰ ἄλλα θεωροῦσιν.

[4.1] Ἄτοπον δ' ἂν δόξειε καὶ ἅμα θαυμαστὸν εἰ ἀπὸ τῶν ἀτελῶν ἔνια γεννᾶ καὶ ταῦτα δένδρων φύσεις μεγάλας οὕτως οἶον ἰτέας καὶ πετέας· ἀτελὲς γὰρ τὸ ὤμῳ. Ἄρ' οὖν εἴπερ τοῦτ' ἀληθὲς διαιρετέον τὴν τελειότητα τὴν τε πρὸς ἡμᾶς καὶ τὴν πρὸς γένεσιν. Ἡ μὲν γὰρ πρὸς τροφήν ἢ δὲ πρὸς δύναμιν τοῦ γεννᾶν· ἔνια δὲ ἄτροφα γεννητικὰ δὲ, τὰ δ' ἴσως ἀνάπαλιν. Τάχα δ' ἐκείνη πρὸς γε τὰ νῦν ἢ διαίσεις ὅτι τὴν πέψιν τιθέμεθα χρώμασι καὶ χυλοῖς καὶ πυκνότητι καὶ τοῖς τοιούτοις· ἐπεὶ τό γ' ἐδώδιμον ὑπάρχει καὶ τοῖς τῆς πετέας καὶ ἄλλοις· ἀλλ' οὐ τοῦτο κύριον ἀλλὰ τὸ γεννᾶν· ἕκαστον γὰρ τῷ ἔργῳ κρίνεται. Καὶ ταῦτα μὲν ὥς πρὸς ὑπόθεσιν.

[2] Ἐκεῖνο δὲ ἀτοπώτατον εἰ τελεούμενα γένους τινὸς ἄγονα γίνεται τὸ ὅλον καίτοι ἀπὸ σπέρματος γινομένου τοῦ δένδρου καθάπερ ἐπὶ τῆς κυπαρίττου. Τὸ γὰρ ἄρρεν γένος ὅλως ἄγονον πολλὰ δὲ καὶ τῶν θηλειῶν. Ἐπεὶ τό γε μὴ καρποφορεῖν ἔνια τῶν ὁμογενῶν ἤττον ἄτοπον. Καὶ πάλιν ἐπὶ τῶν σπερμάτων αὐτὸ πηρωθὲν ἄγονον, ἀλλ' ἴσως τοῦτό γε καὶ ἀναγκαῖον. Τὸ δὲ μηδὲν ὅλως γόνιμον ὥσπερ ἐλέγχει τὴν φύσιν ὅτι ποιεῖ μάτην, ὃ καὶ ἡμῖν ὑπεναντίον πρὸς τὰ πρότερον.

[3] Καὶ τὰ μὲν τῆς πετέας ἀμφισβητούμενα καὶ τῆς ἰτέας. Ὁ δ' ἐρινεὸς ὁμολογουμένως γεννᾶ καὶ ἄπεπτον εἰς τὴν ἡμετέραν τροφήν. Γεννᾶ δὲ καὶ τὸ θύμου ἄνθος καὶ ἄλλων ἃ πρὸς τὴν ἡμετέραν αἴσθησιν ἀφανῆ τὸ δ' ἄνθος μόνον φανερόν. Ἀλλὰ τὸ μὲν τῶν δένδρων τινῶν ἔτι καὶ ἄλλας ἴσως ἀπορίας ἔχει. Καὶ γὰρ τὸ περὶ τοὺς φοινίκας ἄτοπον καὶ λόγου δεόμενον, καὶ τὸ οὕτως ἀμενῆνά τινων εἶναι τὰ σπέρματα καθάπερ καὶ τῆς κυπαρίττου.

[4] Τὰ γὰρ τοιαῦτα δίδωσί τινα ἔννοιαν καὶ ὑπὲρ τοῦ μὴ ἔχειν ἔνια τροφήν πρὸς ἑαυτοῖς· πλὴν ἴσως ἄλλοις ἄλλη καὶ ὕλη καὶ τροφή καὶ ἰκανὸν τισιν ἂν ἔχη τὸ διατηρῆσιν. Ὑπὲρ δὲ τῶν σιτηρῶν καὶ ὅλως τῶν ἐπετείων αἱ μὲν τοιαῦται διαφοραὶ ῥαούς οἶον αἱ κατὰ τὰς βλαστήσεις καὶ τελειώσεις καὶ τὰ λοιπὰ πάθη τὰ συμβαίνοντα τοῖς τοιούτοις.

[5] Περὶ δὲ τῆς ἐξαλλαγῆς εἰς ἕτερον γένος ὥσπερ ἐκ πυρῶν εἰς αἶρας καὶ εἰ δὴ πάλιν τῶν αἰρῶν εἰς πυρούς καὶ τῶν ζειῶν εἰς βρόμον ἄτοπον αὐτῷ τε τῷ συμβαίνοντι καὶ τῷ ἰδίῳ· μόνα γὰρ δὴ ταῦτα μεταβάλλει τῶν σπερμάτων φυσικῶς· ὁ γὰρ ἐκ τῆς τίφης καὶ τῆς ζειᾶς πυρὸς παρασκευὴ πως καὶ τέχνη καθάπερ οἱ τὰ σπέρματα προβρέχοντες εἰς τὴν γλύκανσιν.

[6] Ἄτοπον δὲ πρὸς τῷ μόνα καὶ ὅτι ισχυρότερα δοκοῦντα τῶν χεδροπῶν εἶναι· τὸ γὰρ ἀσθενὲς εὐφθαρτότερον, φθορὰ δέ τις ἢ ἑκστασις· καὶ μᾶλλον

πυρὸς εἰ κριθῆς ἰσχυρότερον. Ἐτι δὲ τὰ μὲν ἰσχυρότερα εἰς τὸ ἀσθενέστερον μεταβάλλειν· ἡ δὲ αἶρα καὶ πυροῦ καὶ κριθῆς ἰσχυρότερον ὥσθ' ἅμα συμβαίνει καὶ τὸ παρὰ φύσιν τοῦ κατὰ φύσιν ἰσχυρότερον.

[7] Ἡ δὲ διαφθορὰ καὶ ἡ μεταβολὴ δυοῖν θάτερον ἢ ἐν τοῖς σπέρμασιν ἢ ἐν τῇ χλόῃ. Σπέρματος μὲν οὖν γαλάκτωσις, σῆψις, ὅλως διάχυσις ὧν οὐδὲν φύσιμον. Ἡ δὲ χλόη ῥιζωθέντων ἤδη, τὰς δὲ ῥίζας μεταβάλλειν ἄτοπον. Ὅθεν δὴ τοῖς τοιούτοις παραπεπεισμένοι τινὲς ὡς ἀλόγοις ὅλως οὐδὲ γίνεσθαί φασιν τὴν ἔκστασιν ἀλλ' ἐπομβρίαίς φύεσθαι καὶ συνίστασθαι τὴν αἶραν ὃ καὶ καθ' αὐτὴν φαίνεται ποιοῦσα μὴ σπαρέντων πυρῶν ἢ κριθῶν ἐν ταῖς ἐπομβροτάταις χώραις.

[8] Αἱ μὲν οὖν ἐναντιώσεις αὗται δοκοῦσιν ἐλέγχεσθαι τοῖς ἔργοις· πολλοὶ γὰρ ὥς φασι σπείραντες πυροὺς ἢ κριθὰς ἐθέρισαν αἶρας. Τὴν δὲ ἔκστασιν καὶ τὴν μεταβολὴν θεῖη τις ἂν ἀμφοτέρως γίνεσθαι καὶ τοῦ σπέρματος ἀλλοιουμένου καὶ τῶν ῥιζῶν· ἡ γὰρ ἐν τῇ χλόῃ μεταβολὴ δι' ἐκείνας· συμφυεῖς δ' οὐσας οὐκ ἄλογον συμπάσχειν. Ἐπεὶ τό γε σπέρμα διαφθαρέν οὐ φύσιμον ὅλως ἦν· τοῦτο μὲν κοινόν· οὐδὲ γὰρ ῥίζαι φθαρεῖσαι τρέφοιεν ἄν.

[9] Τὴν δὲ τοῦ σπέρματος φθορὰν οὐδεμίαν τῶν εἰρημένων ὑποληπτέον, σῆψιν ἢ γαλάκτωσιν, ἀλλ' ἐτέραν ἢ γίνεται διὰ πληθοῦς τῆς τροφῆς ἐκτηκομένων· αὕτη δὲ τὸ μὲν ὅλον οὐκ ἀπόλλυσι μεθίστησι δὲ εἰς ἕτερον ἐπικρατοῦσα πῶς τῆς ἀρχῆς. Τὸ δὲ συμβαῖνον ὁμοιον τρόπον τινὰ καὶ ἐπὶ τῶν ζώων ὡς κατ' ἀναλογίαν ἂν τὸ θῆλυ κρατήσῃ τοῦ ἄρρενος ἢ καὶ ἔτι μείζων ἐναλλαγὴ γένηται πρὸς τὸ παρὰ φύσιν.

[10] Δεῖ γὰρ δὴ τὴν γῆν ὥσπερ τὸ θῆλυ νοῆσαι καὶ τὸ ἀνάλογον οὕτω λαμβάνειν. Ὅταν οὖν ἐκ ταύτης ἡ τροφή πλείων γίνηται διὰ τὰς ἐπομβρίας τότε τὴν ἔκστασιν συμβαίνειν οὐ φθείρουσαν μὲν ὅλως τὴν γεννητικὴν δύναμιν ἐξαλλοιοῦσαν δ' εἰς ἐτέραν. Εὐζώου δὲ τῆς φύσεως οὔσης, εὐζωότερα γὰρ πολὺ τῆς τῶν ζώων, εὐλογον καὶ διαμένειν μᾶλλον ταύτην. Ἐπεὶ καὶ ἄνευ σπερματικῆς ἀρχῆς αὐτόματα πολλὰ συνίσταται καὶ τῶν ἐλαττόνων καὶ τῶν μειζόνων φυτῶν.

[11] Ὅθεν καὶ τοῦτο ἂν εἴη φανερόν· εἴ τις ἀκολουθήσῃ τῇ ἀναλογίᾳ δι' ὅτι τῇ τῶν σπερμάτων ἀλλοιώσει καὶ οὐ τῇ τῆς χλόης μεταβολῇ· καὶ γὰρ ἐπὶ τῶν ζώων οὕτω γίνεται. Καὶ ἅμα δὴ τότε ἀσθενέστατον ὅταν ἐν μεταβολῇ τυγχάνῃ τῇ κατὰ τὴν βλάστησιν, ἤδη δ' ἐκβεβλασθηκὸς καὶ ἐρριζωμένον ὥσπερ γέγονε. Τούτου δὲ καὶ μείωσις εἰς αὔξησιν καὶ τροφήν ἢ καὶ τὴν ὅλην φθορὰν οὐκ εἰς μεταβολήν. Ἐτι δὲ καὶ φασιν οἱ ἔμπειροι φανερόν· εὐθὺς εἶναι τὸ

φύλλον ἀνατέλλον τῆς αἴρας λιπαρώτερον ὃν καὶ ποιωδέστερον καὶ στενότερον καὶ οὐχ ὕστερον τοιοῦτον γινόμενον.

[12] Ἐκ μὲν οὖν τούτων δόξειεν ἂν τοῖς σπέρμασιν. Οὐ μὴν οὐδὲ θάτερον ἀδύνατον οὐδ' ἄλογον ὥστε ἐν τῇ χλόῃ μεταβάλλειν ἀλλοιουμένων τῶν ρίζων· τοῦτο γὰρ ἀνάγκη συμβαίνειν εἴπερ ἅπαν ἀπὸ τῆς ἀρχῆς ἐτέρας ἔτερον. Φαίνεται δὲ τοῦτο καὶ ἐφ' ἐτέρων συμβαίνειν ὥσπερ τῶν δένδρων ὅσα μεταβάλλει ταῖς θεραπαίαις τοὺς καρποὺς ἐξ ὀξέων καὶ πικρῶν εἰς γλυκεῖς καὶ ποτίμους ἢ ἐκ πολυπυρήνων εἰς ἀπυρήνους.

[13] Ἡ δ' αἰτία τῆς μεταβολῆς ὁμοίως καὶ ταύτης πλήθει τροφῆς ὅταν ἐπομβρίαί γίνωνται καὶ ὥς γε δὴ τινές φασι μάλιστα τοῦ ἥρος ἐὰν ἥλιοι συνεπιλάμψωσιν ὥς ἐξ ἀμφοῖν γινομένης τῆς μεταστάσεως. Ἐνιαχοῦ γὰρ ἔν τισι τόποις ἐλώδεσιν ὅλως τοῦτο συμβαίνει καὶ τό τε φύλλον μεταβάλλει ὥστε πᾶσιν εἶναι φανερόν. Ἐὰν δὲ (ὑδα)τα ἐαρινὰ μὴ γίνηται πολὺ γίνεσθαι πυρῶν πλῆθος. Ὡστε τοῦτο μὲν οὐδ' ἐτέρως ἄλογον. Εἰ δὲ καὶ ἀμφοτέρως συμβαίνει τάχ' ἂν οὐδ' ἄτοπον εἴη διαφορὰν τινα συναιτίαν εἶναι καὶ τῶν ἐδαφῶν καὶ τοῦ ἀέρος· ἐπεὶ καὶ σπαρέντων εὐθὺ μεγάλη βλάβη πολυῦδριαν ἐπιγίνεσθαι. Συμβαίνει γὰρ ἀσθενεστερας εἶναι τὰς ρίζας, τὸ δ' ἀσθενὲς εὐπαθέστερον. Ἡ μὲν οὖν ἐξαλλαγὴ διὰ τούτ' ἂν εἴη.

[5.1] Τὸ δὲ μόνον ταῦτα πάσχειν ἔτι δ' ἰσχυρότατα δοκοῦντ' εἶναι, καὶ γὰρ ἡ ζειὰ ἰσχυρόν, μᾶ τινι λύοιτ' ἂν αἰτία καὶ τῇ αὐτῇ· διὰ γὰρ τὸ ἰσχυρότατα καὶ πολυρριζότατα εἶναι πλείστην ἔχοντα τροφήν καὶ μάλιστα πάσχοντα ὑπομένει τὰ δ' ἄλλα φθείρεται τελέως. Ἐτι δ' ἡ ὥρα καθ' ἣν ὁ σπόρος ἐπομβροτέρα καὶ πλείω χρόνον ἐν τῇ γῇ γίνεται, τὰ δὲ πρὸς τὸ ἔαρ καὶ διαγελῶντος ἤδη τοῦ ἀέρος ἐν εὐκρασίᾳ μᾶλλον καὶ εὐθὺς εἰς τὴν βλάστησιν ἢ ἀναδρομή·

[2] δι' ὃ καὶ οὐδ' ἔτερον οὐδὲν ἐκ τῆς διαφθορᾶς αὐτῶν ἂν ποτε διαφθαρή γίνεται. Τὸ μὲν γὰρ εἰς αἶραν ἀξιοῦν ἄτοπον· εἰς γὰρ τὸ σύνεγγυς καὶ ὁμογενές πως αἱ μεταβολαί· τὸ δὲ μηδὲ εἰς ἔτερον μηδὲν εἰς ἀσθένειαν ἀνακτέον ὥς ὅλως φθειρομένων· ἀλλὰ τοῖς ὁμοιοπύροις ἂν εἴη καὶ ὁμοιοκρίτοις μᾶλλον εἰς αἶραν. Τούτων δὲ τὰ μὲν ὅλως οὐχ ὑπομένει διὰ τὴν ἀσθένειαν ὥσπερ ἡ τίφη, τὰ δὲ εἰς τὸ σύνεγγυς μᾶλλον μεταβάλλει καθάπερ ἡ ζειὰ πρὸς τὸν βρόμον.

[3] Ὁ δὲ πυρὸς εἰς τίφην οὐ μεταβάλλει καὶ ζειὰν ἐξαμβλούμενος ὅτι πλείων ἢ τροφή καὶ ἰσχυροτέρα δι' ἣν συμμένει. Τοιαύτη δ' οὐσα οὐκ ἂν ἐκθιλύνειν ἀλλ' εἰς τὸ σφοδρότερον ἀγάγοι καὶ ὅλως ἐκστήσειε τοῦ γένους. Ἐπεὶ μᾶλλον ἂν τις εὐλόγως θαυμάσειεν ὅτι οὐκ εἰς τὸν ἄγριον πυρὸν ὥσπερ καὶ ἄλλα.

Τυγχάνει δὲ καὶ τούτου παραπλησία τις ἡ αἰτία· μετακινεῖ γὰρ ἀπλῶς ἡ φύσις.

[4] Ἄτοπον δὲ καὶ λόγου δεόμενον εἰ καὶ τὸ λίνον ἐξαιρουῖται· μεγάλη γὰρ ἡ διάστασις· εἰ μὴ ἄρα καὶ τοῦτο τῆς τροφῆς ὄγκῳ· φιλεῖ γοῦν χώραν ἀγαθὴν ὥστ' ἐκ τῆς ὑπερβολῆς ἡ ἔκστασις. Ὁ δὲ θερμὸς ἰσχυρὸς ὢν καὶ πρῶτος σπειρόμενος οὐδὲ εἰς ἓν μεταβάλλει διὰ τὴν ἄγαν ἰσχύν· ἐπικρατεῖ γάρ· δεῖ δὲ τὸ μέλλον μεταβάλλειν μὴ ἀπαθὲς εἶναι μήτ' ἄγαν εὐπαθές· τὸ μὲν γὰρ οὐ μετακινεῖται τὸ δ' ὅλως ἀσθενὲς ὃν φθείρεται καθάπερ ἐλέχθη.

[5] Σκεπτέον δὲ καὶ εἴ τι τῶν ἄλλων σπερμάτων ἢ τῶν ἀγρίων ἢ τῶν ἡμέρων δέχεται τὴν τοιαύτην ἀλλοίωσιν. Καὶ περὶ μὲν αἰρῶν ἀρκεῖτω τὰ εἰρημένα. Τὰς γὰρ ἐν αὐτοῖς τοῖς γένεσι τῶν πυρῶν μεταβολὰς, οἷον εἰ ἐκ τοιῶνδε τοιοῖδε γίνονται, καὶ κριθαὶ καὶ τᾶλλα ὡσαύτως οὐκέτι ζητοῦμεν οὐδὲ τοῦτ' ἔχει τι θαυμαστόν. Ἡ γὰρ ὥρα καὶ αἱ τροφαὶ καὶ ὁ ἀῆρ καθάπερ εἴρηται ποιοῦσι τὰς ἀλλοιώσεις ὁμοίως ζώων καὶ φυτῶν·

[6] ὁ καὶ πρὸς τὴν ἔκστασιν ὅλως τοῦ γένους χρῆναί φαμεν μετενεγκεῖν, ποιάν τινα καὶ ποσὴν ποιήσαντες τὴν τροφήν· ἐπεὶ καὶ τῶν δένδρων καὶ ὅλως τῶν φυτῶν αἱ ἐν ταῖς ἱστορίαις εἰρημέναι μεταβολαὶ διὰ ταύτας γίνονται τὰς αἰτίας ὥσπερ ἐν τοῖς πρότερον ἐλέχθη· τῶν μὲν ἀτροφούντων ἐν μὴ οἰκείαις τροφαῖς καὶ θεραπαίαις· ὥσπερ τὸ σισύμβριον ὅταν εἰς μίνθαν· ἀπόλλυται γὰρ τὸ δριμύ τῆς ὁσμῆς καὶ οἷον ἀποθηλύνεται, διὰ τὴν τροφήν δὲ καὶ ἀργίαν ἢ ἀπαργίωσις· ἔνια δ' ὅλως καὶ ἀπόλλυσιν ὥσπερ τὴν μίνθαν καταπνιγομένον τῶν ριζῶν ὑφ' αὐτῶν.

[7] Ἡ δὲ λεύκη τὸ μὲν ὅλον οὐ πόρρω τῆς αἰγείρου καὶ τῇ ὅλῃ μορφῇ καὶ τοῖς φύλλοις· ἀπογηράσκουσιν δὲ ἐξομοιοῦσθαι τῷ καταξηραίνεσθαι καὶ μᾶλλον ἀτροφεῖν οὐκ ἄλογον. Ἀλλὰ περὶ μὲν τούτων ἐν ἄλλοις διὰ πλειόνων εἴρηται, καὶ ὅτι δὲ καὶ περὶ τὰ ζῶα κατὰ μὲν τὰς γενέσεις τοιοῦτόν τι συμβαίνει, τελεσθεῖσθαι δὲ τῶν νεοσσιῶν οὐκέτι, πλὴν εἴ τις τὰς κατὰ τὰς ὀρνίθας ἀλλοιώσεις ἅμα ταῖς ὥραις γινομένας λέγοι. Φαίνονται δὲ αὐταὶ γε πάθεσι μᾶλλον ὅμοιαι σωματικοῖς ἢ μεταβολαῖς.

[6.1] Τῶν δὲ ἄλλων τῶν περὶ τὰ σπέρματα μάλιστα ἄπορον εἴπερ ἀληθὲς τὸ παρὰ μέρος καὶ μὴ ἅμα γεννᾶν ἔνια καθάπερ ἐπὶ τε τοῦ αἰγίλωπος λέγεται καὶ τοῦ λωτοῦ καὶ τοῦ βολβοῦ. Τοῦτο δ' οἱ μὲν φασιν εἶναι ψεῦδος ἀλλ' ἀπὸ τῆς ρίζης βλαστάνειν τῷ ὕστερον ἔτει ἢ ἀπὸ τοῦ σπέρματος ὑπολαμβάνουσιν· οἱ δ' ὥς ἀληθὲς διατείνονται σημεῖα φέροντες ἄλλα τε καὶ ὅτι ἀπολλύντες τὸν αἰγίλωπα διετὴ τὸν ἀργὸν ποιοῦσι ὅπως ἀμφοτέρω τὰ σπέρματα ἐκβλαστήσῃ καὶ ἐπινεμηθῇ τε καὶ ἐκθερισθῇ τὸ ὅλον ὁ καρπός.

[2] Ἐχει δέ τινα καὶ ἄλλως ἀπορίαν ἢ παρ' ἔτος βλάστησις καὶ εἶπερ συνεχές ὃν καὶ δίκρουν ὥσπερ φαίνεται καὶ ἅμα πίπτον τὸ μὲν ἀλλοιοῦται καὶ διαβλαστάνει τὸ δ' ἀπαθὲς διαμένει πάντα τὸν ἐνιαυτόν· ὅσῳ γὰρ ἀσθενέστερον τὸ ἔλαττον ὃ δὴ φασὶ διαμένειν τοσούτῳ καὶ εὐπαθέστερον ἐχρῆν εἶναι καὶ εἰς τὴν διαβλάστησιν καὶ εἰς τὴν ὅλην φθοράν. Ἀνάγκη δὲ δῆλον ὅτι καὶ ὅταν ἐκβλαστήσῃ θάτερον χωρίζεσθαι· μὴ γὰρ χωρισθὲν καὶ εἰ μὴ γίνεται συμπαθές, ἀλλ' ἐξαιρουμένων γε τῶν ρίζων συναίροιτ' ἂν, πολλάκις δὲ τοῦτο δρῶσιν οἱ γεωργοὶ καὶ οὐ φασὶ φθεῖρην.

[3] Τὸ δὲ διαρκεῖν ἀπαθὲς ἐν τῇ γῇ μέχρι μὲν τῆς οἰκείας ὥρας εἰς τὴν ἔκφυσιν εὐλογόν τε καὶ ἐπὶ πολλῶν γινόμενον· τὸ δ' ὅλον ἐνιαυτὸν ἐπισχεῖν ἤδη θαυμασιώτερον. Ἀλλὰ μὴν καὶ τὸ μὲν τέλος τὸ δὲ ἀτελές αὐτῶν εἶναι τελεοῦσθαι δὲ παρ' ἐνιαυτὸν ἄλογον· οὔτε γὰρ ἀσθενὲς ἀλλ' ἰσχυρὸν ὁ αἰγίλωψ ὥστε ἐκτελεοῦν δύνασθαι πλείω καὶ ἔνια δὴ καὶ τῶν ἀσθενεστέρων τοῦτο δρᾷ· ἢ τε αὖτε τελέωσις ἢ κατὰ φύσιν οἰκειοτάτη τάχα δὲ καὶ μόνη· τροφήν γὰρ τότε λαμβάνει τὴν αὐτοῦ διὰ δὲ τῆς τροφῆς ἢ αὖξιν καὶ τὸ τέλος, χωρισθὲν δὲ ἤτοι φθείρεται ἀμπαν ἢ ἀναυξὲς καὶ ἀνεπίδοτον ἔσται. Πολυχίτωνι δ' εἶναι καὶ τῷ βρόμῳ καὶ τῇ ζειᾷ συμβέβηκεν ὥστ' ἐχρῆν καὶ ταῦτα διαμένειν ἀπαθῆ.

[4] Τὰ μὲν οὖν ἀντιβαίνοντα σχεδὸν ταῦτ' ἐστίν. Οὐ μὴν ἀλλ' εἰ δεῖ λέγειν τὴν αἰτίαν ἐκείνην ἃν τις ἴσως μάλιστα εἴποι τὴν φάσκουσιν μὴ τελεοῦσθαι ἅμῳ πρὸς τὸ φύσιμα ποιεῖν, ἀλλ' ὅμοιον τι συμβαίνειν καὶ τῶν ὠτοκόων καὶ τῶν σκωληκοτόκων τισί· τὰ γὰρ ὡὰ ἀποτικτόμενα τρέφεται καὶ ἐκτελεοῦται τὰ μὲν ἐν τῷ ὕδατι καὶ τῇ θαλάττῃ τὰ δὲ ἐν τῇ γῇ καὶ τῷ ἀέρι καὶ ταῦτα δεχόμενα ζωοποιεῖ, τὰ δὲ φύσαντα καὶ ἐκτεκόντα ἐξαδυνατεῖ.

[5] Φαίνεται δὲ τοῦτό γε καὶ ἄλλως ἀληθὲς ὥς οὐκ εὐθὺς ἀλοθθέντα τὰ σπέρματα βελτίω τῶν χρονισθέντων οὐδὲ τὰ νέα τῶν ἔνων ὥσπερ εἵπομεν ἀλλὰ δεῖ τινα λαβεῖν ἐν ἑαυτοῖς οἷον πέσιν καὶ δύναμιν ἀποπνεύσαντος τοῦ ἀλλοτρίου. Τί οὖν ἴσως ἃν τις φασὶ κωλύει καὶ ἐπὶ τῶν ἀπορουμένων τοιοῦτόν τι συμβαίνειν ὥστε καὶ τελέωσιν λαμβάνειν καὶ δύναμιν ἐκπεττόμενά πως τῇ θερμότητι τῇ τε ἐν ἑαυτοῖς καὶ τῇ περιεχούσῃ.

[6] Ἡ τοῦτο παράλογον ὥς μᾶλλον ἐν τῇ γῇ κατακλειομένη ἢ θερμότης ἐκπέττει τὴν τροφήν τὴν ἐν τῷ σπέρματι καὶ τελεοῖ τῆς ἐν τῷ ἀέρι, καὶ ταῦτα πεφυκότων ἐν τούτῳ τελεοῦσθαι καὶ ἅμα λαμβανόντων τροφήν οὐκ ὠμὴν ἀλλὰ προπεπονημένην ὑπὸ τοῦ καυλοῦ καὶ τῶν ρίζων; [7] ἔτι δὲ τῶν μὲν ὧν μία τις ἢ πέψις καὶ τελέωσις ἀπάντων, εἴθ' ὑπὸ τῶν ἔξω· συμβαίνει γὰρ ὥσπερ

τὸ μὲν κατὰ φύσιν τὸ δὲ παρὰ φύσιν· καὶ ταῦτ' ἰσχύοντος ἔτι τοῦ φυτοῦ καὶ οὐ περιλαμβανομένον τῇ ὥρᾳ πρὸς τὴν πέψιν. Πλὴν εἴ τις λέγοι ὅτι προεκπηδᾷ τὰ σπέρματα πρὶν τελειωθῆναι διὰ τὸ τὴν φύσιν ἔχειν ἀσθενῆ. Συμβαίνει μὲν δὴ τοῦτο καὶ πολὺ προτερεῖ τῶν κριθῶν ὥστε κενὸν ἐστάναι τὸν κάλαμον· τοῦτ' οὖν εἰς τὴν οὐσίαν ἀνακτέον καὶ τὸ συνεκτρέφεσθαι δὲ καὶ τελειοῦσθαι τοῖς περιέχουσιν οὐκ ἄλογον. Ἐπεὶ τό γε διαμένειν ἀπαθὲς ἄλλως τε καὶ ἐν χιτῶσι τοσοῦτοις ἦττον θαυμαστόν. Πολλὰ γοῦν φαίνεται καθάπερ ἐλέγχθῃ καὶ τῶν ἄλλων μᾶλλον δὲ πάντα διατηρούμενα πρὸς τὴν οἰκείαν ὥραν. Ἐκεῖνο γὰρ ἔτι θαυμασιώτερον ὅπερ εἴρηται περὶ τῶν τευτλίων ὅτι οὐ μόνον ἐνὶ μηνὶ καὶ δυοῖν καὶ τρισὶν ὕστερον ἄλλ' ἐνιαυτῷ διαβλαστάνει τινὰ καὶ ταῦτα βρεχομένου καὶ κηπευομένου τοῦ τόπου.

[8] Ἔστι δὲ καὶ τὸ τοῦ λωτοῦ σπέρμα τοιοῦτον ἢ τό γε περιέχον τὸν καρπὸν διὰ τὸ μὴ εὐχώριστον εἶναι μὴδ' ὁμοίως ἀφαδρύνεσθαι. Τὸ δὲ τοῦ βολβοῦ καὶ τῷ μεγέθει διάφορον, σκεπτέον δὲ ὑπὲρ αὐτοῦ. Εἰ δ' οὖν οὕτως ἔνια δυσφυῆ τῶν σπερμάτων ὥστε πολλοῖς ὕστερον χρόνοις ἀνατέλλειν δῆλον ὅτι ταῦτα πέττεται καὶ τελειοῦται πρὸς τὴν βλάστησιν ἐν τῇ γῇ δι' ὃ καὶ αὕτη τις ἂν εἴη συνεργοῦσα πίστις. Ἀντιβαίνει δ' αὐτῇ τὸ καὶ πρότερον λεχθὲν ὅτι καὶ τελειοῦταί τινα κατὰ τὴν πρόσφυσιν ἃ καὶ σπειρόμενα διαβλαστάνει παραχρῆμα.

[9] Μείζον δ' ἔτι καὶ τῶν περὶ τὰ σπέρματα καὶ τοὺς καρποὺς ἀπορημάτων οὐχ ὑποπίπτον δὲ ὑπὸ τὴν αἰτίαν ταύτην τὸ περὶ τὸν λωτὸν συμβαῖνον· τοῦτο δὲ ἐστὶ δένδρον παρόμοιον ἔχον τὸν καρπὸν τῷ λωτῷ· καὶ τὸ περὶ τὸν τιθύμαλλον τὸν μυρτίτην καλούμενον· τοῦτο δ' οὐ δένδρον ἀλλὰ θάμνος ἐπιγειόκαυλος· ἀμφοτέρα γὰρ ταῦτά φασι παρὰ μέρος φέρειν ἐξ ἐκατέρων τῶν βλαστῶν ὥστ' ἀνάγκη τὸν μερισμὸν τῶν δυνάμεων ἐν ταῖς ρίζαις ποιεῖν. Ἀλλὰ περὶ μὲν τούτων ἐπισκεπτέον.

[7.1] Τῶν δὲ σιτηρῶν σπερμάτων εἴ τινες διαφοραὶ κατὰ τὴν ἔκφυσιν ἢ τοὺς καρποὺς ἢ τὴν ἄλλην οὐσίαν δεῖ πειρᾶσθαι λέγειν. Οἶον ὅτι πυρὸς μὲν καὶ κριθὴ καὶ τὰ ὅμοια πρωῒσπορεῖται, χεδροπὰ δὲ πρὸς τὸ ἔαρ πλὴν κυάμου καὶ θέρμου. Τοῦτο γὰρ ποιοῦσιν ὅτι τὰ μὲν σιτώδη ρίζωθῆναι δεῖ πρὸς τὸ μὴ μονόκαυλα γίνεσθαι τῆς ἀναφορᾶς εὐθὺς ἄνω γινομένης. Ῥιζοῦνται δὲ κατεχόμενα καὶ πιλούμενα τοῖς χειμῶσιν ὥστε πολλὰς ἀρχὰς λαμβάνειν τῆς βλάστης.

[2] Τὰ δὲ χεδροπὰ μονόρριζα τε καὶ ἰσχυρόρριζα καὶ εὐθὺς τὴν ὁρμὴν ἄνω ποιούμενα προσφόρως ἔχει τῇ ὥρᾳ· τὸ γὰρ πολὺ τῆς φύσεως ἐν τῷ ἀέρι. Τὸν

δὲ κύαμον πρωΐσποροῦσιν ὥσπερ εἶρηται διὰ τὴν ἀσθένειαν ὅπως ρίζωθεις ἐν ταῖς εὐδαίαις ἀντέχῃ τοῖς χειμῶσι, τὸν δ' αὖ θερμὸν εὐθὺς ἀπὸ τῆς ἄλλω δι' ὅτι μὴ καταβληθεὶς ἔτι θερμῆς οὕσης τῆς γῆς κακοβλαστῆς γίνεται. Τούτου δ' αἴτιον ὅτι ἀτέραμον φύσει καὶ ὥσπερ ἄπεπτον· δηλοῖ δ' ἡ πικρότης δι' ὅτι πολλῆς δεῖται θερμότητος.

[3] Ἐὰν μὲν οὖν προσλάβῃ τὴν ἐκ τῆς χώρας δύναται κατεργασθῆναι καὶ εὐβλαστεῖν, εἰ δὲ μὴ κακοβλαστεῖ καὶ παρόμοιον τὸ ξυμβαῖνον ὥσπερ εἴ τις ὀλίγῳ πυρὶ τὸ ἰσχυρότατον κρέας ὀπτᾶν ἐπιχειροίῃ. Διὰ τοῦτο δ' ἔοικεν οὐδὲ τὴν ἀγαθὴν χώραν φιλεῖν ἀλλὰ τὴν ὑφαμμον· εὐθερμαντοτέρα γὰρ αὕτη καὶ οἷον εὐκατεργαστοτέρα. Καὶ κρύπτεσθαι οὐκ ἐθέλει κατὰ βάθους ἀλλ' ἐπιπολῆς, ὅπως μᾶλλον ἀπολάβῃ τῆς θερμότητος τῆς ἀπὸ τοῦ ἀέρος καὶ μετέωρος ὧν ἐκβλαστάνῃ καὶ καθίῃ τὴν ρίζαν.

[4] Καὶ τὰ μὲν τοιαῦτα σχεδὸν ὥσπερ γεωργικά· τὰ δὲ αὖ τῆς φύσεως οἷον ὅτι τῶν μὲν χεδροπῶν ἐκ τοῦ αὐτοῦ μέρους ἢ τε ρίζα καὶ ὁ καυλὸς ἐκβλαστάνει καὶ τὸ μὲν εὐθὺς ἄνω τὸ δὲ κάτω νεύει καὶ ὀρμᾷ, πυροῦ δὲ καὶ κριθῆς καὶ ὅλως τῶν σιτωδῶν ἐξ ἐκατέρων τῶν ἄκρων, ἀπὸ μὲν τοῦ παχέος ἢ πρὸς τῷ στάχυϊ προσπέφυκεν ἡ ρίζα, ἀπὸ δὲ τοῦ λεπτοῦ ὅθεν ὁ ἀθήρ ὁ καυλὸς, ὡς ὃν ἐκάτερον ἀνὰ λόγον τὸ μὲν ἀπὸ τοῦ ἄνω τὸ δὲ ἀπὸ τοῦ κάτω, καὶ γὰρ ἡ ρίζα καὶ ὁ καυλὸς οὕτω.

[5] Τὴν δ' αἰτίαν εὐθὺς ἐν τῇ φύσει ληπτέον ὅτι τὰ μὲν χεδροπὰ δίθυρα ὄντα μίαν τινὰ καὶ τὴν αὐτὴν ἀρχὴν ἀμφοῖν ἔχει κατὰ τὸ ἄκρον ὃ καὶ φαίνεται προσπεφυκὸς ὥσπερ ἔξωθεν ἢ καὶ συνάπτουσι πρὸς τὸν λόβον. Ἄτε γὰρ ἐναγγειόσπερμα ὄντα ταύτην μὲν ἐξ ἀνάγκης ἔχει, τρέφεσθαι γὰρ ἄλλως οὐκ ἦν, τὴν δ' ἐκ τοῦ ἐτέρου μέρους ἀδύνατον συνεχῇ τ' ἀλλήλοις ὄντα καὶ περιεχόμενα τῷ λοβῷ· τὸ δ' εἶναι τοιαῦτα τῆς οὐσίας.

[6] Ὅστε τούτων μὲν εἰκότως ἡ φύσις εἰς ταὐτὸ τὰς ἀρχὰς ἔθηκε, τῶν δὲ σιτωδῶν καθ' αὐτά τε πεφυκότων καὶ περιεχομένων ἔτι δ' ὥσπερ εὐθέων πως ὄντων τὴν μορφήν ἐχώρισε τὴν ἔκφυσιν ἀπὸ μιᾶς μὲν ἀρχῆς ἀμφοτέρας ποιήσασα συνεχοῦς δέ τινος οὕσης καὶ διηκούσης ἐφ' ἐκάτερον τῶν ἄκρων ὥσπερ καὶ κατὰ τὴν βλάστησιν φανερά διατείνουσα κατὰ τὴν ἐντομήν. Τοῦ μὲν οὖν μὴ ὁμοίως ἔχειν ταύτην ὑποληπτέον τὴν αἰτίαν·

[7] ἐκεῖνο δ' ὁμοίως ἐν ἀμφοῖν ἐστὶν ὥστε τὴν τῆς ρίζης φύσιν ἀπὸ τοῦ αὐτοῦ κατὰ τὴν ἐν τῷ στάχυϊ καὶ τῷ λοβῷ γίνεσθαι πρόσφυσιν ἀφ' οὗ ἀμφοτέρων αἱ τροφαὶ, τοῦ μὲν καλάμου καὶ τῆς πρώτης βλάστης ἡ ρίζα τῶν δὲ καρπῶν ἡ πρόσφυσις ἢ τε πρὸς τὸν λοβὸν καὶ πρὸς τὸν στάχυν ... πίπτει δὲ

τῶν καρνωδῶν καὶ βαλανωδῶν. Καὶ τὰ μὲν περὶ τὴν ἔκφυσιν οὕτως ἂν τις διέλοι.

[8.1] Τὴν δὲ ταχυβλαστίαν τοῖς χεδροποῖς ἀποδοίη τις ἂν διὰ τὴν ὥραν ὅτι μαλακωτέρα καὶ γονιμωτέρα τῆς χειμερινῆς· ἀλλὰ μᾶλλον τούτου αἰτιάσαιτ' ἂν τις τὴν ἀσθένειαν δι' ἣν καὶ σπεύρονται πρὸς τὸ ἔαρ καὶ διαβλαστάνουσι θᾶπτον· τὸ γὰρ ἀσθενέστερον ὥσπερ πολλάκις ἐλέγομεν εὐπαθέστερον. Τάχα δὲ καὶ τῆς πολυκαρπίας, πολυχούστερα γὰρ δὴ τὰ χεδροπὰ, τὴν αὐτὴν ἢ παραπλησίαν, καὶ τοῦ θᾶπτον δὲ ἐκτελεοῦν καὶ μὴ καρπίζεσθαι τὴν γῆν ἀλλὰ νειὸν ποιεῖν· ἅπαντα γὰρ ταῦτα ἢ τὰ τοιαῦτα συμβαίνει σχεδὸν ὥς ἀπλῶς εἰπεῖν διὰ τὴν ἀσθένειαν.

[2] Καὶ γὰρ ἐκθρέψαι καὶ τελειῶσαι ῥᾶον τὸ ἀσθενέστερον ὥστε καὶ πολυκαρπεῖν καὶ τὴν γῆν ἥττον καρπίζεσθαι καὶ τὴν ἔκφυσιν δὲ τὴν πρώτην ῥᾶω καὶ θάττω ποιεῖσθαι. Πλὴν εἴ τι κωλύεται διὰ τὴν ἰσχὺν τοῦ περιέχοντος ὥσπερ ὁ κύαμος· αἰτία γὰρ τούτῳ τῆς δυσφυΐας ἢ τοῦ κελύφους παχύτης· ἐὰν δὲ καὶ ἐφύση σπαρέντι δυσφυέστερον ἔτι καθάπερ ἐδαφιζομένης τῆς γῆς. Ἐν δὲ τοῖς σιτηροῖς καὶ ταῦθ' ὁμολογούμενα πρὸς τε τὴν χρονιότητα τῆς πέψεως καὶ πρὸς τὸν καρπισμὸν τῆς γῆς οἷον ἢ τε πολυρριζία καὶ ἡ γλισχρότης τῶν καρπῶν· βραδέως γὰρ τὰ γλίσχρα καὶ καθαρὰ καὶ ἐν τοῖς δένδροις πεπαίνεται.

[3] Δι' ὃ καὶ πυροὶ κριθῶν ὀψιαίτεροι καὶ ὀλιγοχούστεροι· καὶ αἱ ῥίζαι δὲ τῶν σιτηρῶν πολλαὶ καὶ κατὰ βάθους οὔσαι καρπίζονται μᾶλλον τὸ ἔδαφος, τῶν δὲ χεδροπῶν ὃ τε καρπὸς γεωδέστερος καὶ ἡ ῥίζα μία καὶ ἐπιπολῆς καὶ ἡ σπορὰ μανῆ. Πάντα δὲ ταῦτα συνεργεῖ καὶ πρὸς πλῆθος καρποῦ καὶ πρὸς κουφότητα τῆς γῆς καὶ τὸ (μὴ) ὁμοίως καρπίζεσθαι πρὸς ταχύτητα πέψεως. Ἄπασα γὰρ ἡ δύναμις ἄνω φερομένη καὶ οὐκ ἀντισπάσης τῆς ῥίζης πλῆθος ἀποδίδωσι καὶ συνεργοῦντος τοῦ ἀέρος ἐκπέττει ῥαδίως. Ἐπεὶ ὦν τε πλείων ἡ ῥίζα καὶ κατὰ βάθους καὶ οἱ καρποὶ ξυλώδεις τάχιστα ἐκκαρπίζεται τὰ ἐδάφη καθάπερ ὁ ἐρέβινθος δι' ὃ καὶ μόνος οὐ ποιεῖ νειὸν οὐδ' ἐστὶ τῆς τυχούσης χώρας ἄλλ' ἀγαθῆς.

[4] Ἄλογον δὲ ἐπὶ τούτου φαίνεται τὸ ταχὺ τελειοῦσθαι εἴπερ ἐν τετταράκοντα ἡμέραις ἢ μικρῷ πλείοσι τέλειος. Αἰτίαν δ' ἂν τις ὑπολάβοι τὴν ἰσχὺν ἢ δύναται τῶν τε ἄλλων κρατεῖν καὶ πρὸς τοῦτο διαρκεῖν, εἴπερ καὶ ὕδατος ἐλαχίστου δεῖται πρὸς τὸ διαβλαστεῖν μόνον εἴτα αὐτὸς αὐτὸν ἐκτρέφει, εἰ μὴ ἄρα τι καὶ ἡ ἄλμη πρὸς τὴν τελειώσιν συμβάλλεται καταξηραίνουσα καὶ ἐξικμάζουσα τὴν ὑγρότητα τὴν πλείω τῆς συμμετρου. Φαίνεται δὲ συνεργεῖν πως τῇ γενέσει καὶ οἰκεῖον εἶναι· σημεῖον δ' ὅτι καὶ οἱ

πρὸς τῇ θαλάττῃ βελτίους γίνονται καὶ ὅτι καταπλυθείσης τῆς ἄλμης ἀπόλλυται καὶ ἐκζωοῦται δι' ἣν δ' αἰτίαν μόνον τοῦτο σκεπτέον εἰ μὴ ἄρα τῆς οὐσίας.

[5] Μόνα δ' ἀπὸ τῶν ῥιζῶν ἀποφύεται τῷ ὕστερον ἔτει πυρὸς καὶ κριθῇ καὶ αὐτοετείς δὲ καὶ ἀπὸ τῶν εἰς κράστιν σπαρέντων ἐτέρου καλάμου παραβλαστάνοντος· αἴτιον δ' ὅτι μόνοις ὕπεστι πλῆθος ῥιζῶν καὶ δύναμις, τὰ χεδροπὰ δὲ μονόρριζα καὶ ξυλώδη καὶ ἐπιπολῆς. Ὡσαύτως δὲ καὶ ἐπὶ τῶν καταπατουμένων ὑπὸ τῶν στρατοπέδων ὥστε μηδὲν εἶναι δῆλον. Ἐξ ἀπάντων δὲ οἱ στάχυνες μικροὶ καὶ ἀτελεῖς ἅτε παλιμβλαστεῖς ὄντες.

[9.1] Περὶ δὲ τοῦ εἶναι βαρύτερα τὰ χεδροπὰ πρὸς τὰς τροφὰς ἢ τὸν σῖτον ἡμῖν καίπερ ἐλάττω χρόνον ἐν τῇ γῇ γινόμενα, - δοκεῖ δὲ καὶ πρὸς κουφότητα διαφέρειν τοῦτο, δι' ὃ καὶ τῶν πυρῶν οἱ τρίμηνοι κουφότατοι καὶ τῶν κριθῶν ὁμοίως ὡς ἐλάττονος ἐνυπάρχοντος τοῦ γεώδους διὰ τὴν βραχύτητα τοῦ χρόνου, - τοῖς δὲ ἄλλοις ζώοις καὶ προσφιλεῖ καὶ ἄλυπα ταῦτ' εἶναι ἃ χαλεπώτατα ἡμῖν καὶ πάλιν ἃ ἡμῖν εὐκατέργαστα ταῦτ' ἐκείνοις χαλεπώτατα καίπερ ἰσχυροτέροις οὖσι. Πολλὰ γοῦν ἀπόλλυται χορτασθέντα πυρῶν· καίτοι τὸ γεῶδες ἐλάχιστον ἔχουσι.

[2] Πρὸς δὴ ταύτας τὰς ἀπορίας καὶ εἰ τις ἄλλη παραπλησία ταύταις καθόλου μὲν καὶ κοινὴν τήνδε λαβεῖν χρή τὴν ἀρχὴν ὡς οὐ πᾶσι ταῦτά πρόσφορα κατὰ τὰς τροφὰς ἀλλ' ἐκάστοις κατὰ τὰς ἰδίας φύσεις. Ὅπερ ἐν πολλοῖς μὲν φανερόν ἐκ πλείστης δ' ἀποφάνσεως ὡς εἰπεῖν τῶν γε γνωρίμων τὸ περὶ τὰς ἐλάφους αἱ τοὺς ἔχεις ἐσθίουσιν ὑφ' ὧν τὰ ἄλλα θνήσκουσι πολὺ μείζω καὶ ἰσχυρότερα τὴν φύσιν ὄντα· καὶ ἐπ' ἄλλων δὲ τό γε τοιοῦτόν ἐστι ὥστ' ἀναιρεῖσθαι ταῖς πληγαῖς ὑφ' ὧν οὐδὲν ἄνθρωποι πάσχουσι καθάπερ οἱ ὄφεις ὑπὸ τῶν σκορπίων.

[3] Ὑποκειμένου δ' οὗν τούτου καὶ τῶν ἄλλων γεωδεστέρα τροφῇ χρωμένων οὐκ ἄλογον ἐκείνην μᾶλλον αὐτοῖς ἀρμόττειν, ταύτην δ' ἄλλοτριωτέραν εἶναι καὶ ἀπρόσφορον καὶ διὰ τὴν γλυκύτητα καὶ τὴν ἡδονὴν πλείω προσενεγκαμένων ῥήγνυσθαι. Τοῦτο μὲν οὗν καθόλου καὶ κοινόν. Ἴδιον δ' ὅτι καὶ συμβαίνει τὰς κοιλίας ἐκπνευματοῦσθαι ἢ πᾶσιν ἢ τοῖς ἔχουσιν ἐχῖνον· φουσῶδες γὰρ καὶ οὐκ εὐκατέργαστον ὁ πυρὸς ὠμὸς ὧν ἔτι δ' ἦττον τὸ ἄχυρον· μέγα δὲ καὶ τὸ ἀσύνηθες εἶναι· τὰ γὰρ ξένα κἂν ἢ κοῦφα διαταράττει πλῆθος λαμβάνοντα.

[4] Διὰ δὴ ταύτας τὰς αἰτίας ὡς ἀπλῶς εἰπεῖν οὐκ ἀλόγως μὲν ἔχει δοκεῖ δὲ τῇ παραλλαγῇ· ὡς δὲ [ἀπλῶς] εἰπεῖν τύπῳ πρὸς βαρύτητα καὶ κουφότητα

τροφῆς καὶ ἡμῖν καὶ τοῖς ἄλλοις τῆς κατὰ φύσιν ἐκάστοις οἰκείας αἱ χῶραι καὶ ὁ ἀὴρ ποιεῖ τὰς διαφοράς· τὰ μὲν γὰρ ἐκ τῶν εὐείλων καὶ εὐπνων καὶ λεπτογείων κουφότατα· τὰ δ' ἐκ τῶν ψυχρῶν καὶ ἐπόμβρων βαρύτερα διὰ τὸ πλείω τροφήν καὶ ἰσχυροτέραν ἔχειν.

[5] Καὶ διὰ τοῦτο τοῦ μὲν ἄλλου πυροῦ δοκεῖ τοῦ Ἀθήναζε καταπλέοντος ὁ σικελικὸς ἰσχυρότατος εἶναι, τούτου δ' ἔτι βαρύτερος μᾶλλον ὁ βοιώτιος ὥσπερ ἐν ταῖς ἱστορίαις εἴρηται· καὶ γὰρ ἡ χώρα πείρα καὶ ὁ ἀὴρ ψυχρός. Καὶ τὰ ἄλλα γένη τῶν καρπῶν παραπλησίως ἔχει τῇ βαρύτητι. Ἐν δὲ ταῖς Πιεσάγγαις ὁ διαρρηγνύων ὃν εἶπαμεν ὑπερβάλλων δῆλον ὅτι τῇ βαρύτητι. Ὁ δὲ ποντικὸς κουφότατος καὶ σκληρότατος καίπερ ψυχροῦ τοῦ ἀέρος ὄντος ὅτι καὶ τὰ σπέρματα καὶ τὰ ἐδάφη κουφότερα καὶ ἡ χιὼν συνεκπέττει μᾶλλον.

[6] Ὅτι δὲ καὶ τὰ σπέρματα ῥοπήν οὐ μικρὰν ἔχει φανερόν ἐκ τῶν τριμήνων καὶ εἴ τινες ἐν ἐλάττονι χρόνῳ τελειοῦνται τούτου· οὐ πολὺ γὰρ τοῦ γεώδους ἔλκοντες ἀλλὰ κουφοτέρᾳ τῇ τροφῇ χρώμενοι κουφοτέραν ποιοῦσι καὶ τὴν προσφοράν. Ἔοικε δὲ καὶ ἡ ὥρα τι συμβάλλεσθαι πρὸς τὸ μὴ χρονίζειν. Οἶον γὰρ εἰς ὀργῶσαν πίπτει τὴν γῆν καὶ παραπλήσιον τὸ συμβαῖνον ὥσπερ τὰ ἐπὶ τὸ ζέον ἐμβαλλόμενα τῶν ἐγομένων· οὐδεμίαν γὰρ οὐδὲ κάκεῖνα λαμβάνει μόλυνσιν. Εἰ δὲ τινες τῶν ὀλιγοχρονίων τούτων βαρεῖς ὥσπερ φασι τοὺς περὶ Λῆμνον ἐνταῦθα τοῦ σπέρματος τὴν φύσιν αὐτοῦ κατάλοιπον αἰτιάσθαι. Καὶ περὶ μὲν τούτων ἀρκεῖ τὰ εἰρημένα.

[10.1] Τὴν δὲ ἄνθησιν πολυχρονιωτέραν ποιοῦνται τὰ χεδροπὰ τῶν σιτωδῶν ὅτι τῶν μὲν ἀσθενὲς τὸ ἄνθος· εἴρηται δὲ ὅτι τὰ ἀσθενέστερα πανταχοῦ θάπτον τελεοῦνται. Δι' ὃ καὶ βρέχεσθαι τὰ μὲν οὐ δύναται τὰ δὲ καὶ ζητεῖ καὶ ὀνίναται· τάχα δὲ τοῦτό γε κατὰ συμβεβηκὸς ὅτι τὸ ὅλον φυτὸν εὐτραφεῖ βρεχόμενον, ὁ δὲ καρπὸς δεῖται βοηθείας πρὸς τὴν τελέωσιν, μάλιστα δ' ὁ κύαμος ὅτι μανότατον καὶ πολυανθέστατον καὶ πολυκαρπώτατον. Ὁ δὲ ἐρέβινθος ἀπόλλυται διὰ τὴν εἰρημένην αἰτίαν.

[2] Ἀλλὰ περὶ μὲν τοῦ σίτου τῆς διαφθορᾶς λεκτέον. Αἰτιάσαιτο δ' ἂν τις μάλιστα τὴν ἀσθένειαν· οὐχ ὑποφέρει γὰρ ἀλλὰ φθείρεται καὶ ἀποπίπτει καθάπερ καὶ τῶν δένδρων ἐνίων ὅτε μὲν οἶον ἐρυσιβούμενα ὅτε δὲ ἐξυγραινόμενα λίαν. Εὐλόγως δὲ καὶ ἡ ἄνθησις οὐχ ἅμα πᾶσι τοῖς μέρεσι· κεχώρισται γὰρ ἐκτὸς τῶν λοβῶν καὶ διὰ τὴν εὐτροφίαν· τὰ μὲν γὰρ ἤδη κύει καὶ ἀνθεῖ τὰ δ' ἄνω προσάύξεται· δι' ὃ καὶ τὰ μὲν αὔα καὶ τέλεια καίπερ ἐγγυτάτῳ τῆς τροφῆς ὄντα τὰ δ' ἐπὶ τῶν ἄκρων χλωρά·

[3] τοῦτο δ' οὐκ ἴδιον ἀλλὰ καὶ ἐτέρων καὶ πλειόνων κοινόν· πολλὰ γὰρ

ἀνθεῖ καὶ γονεύει κατὰ μέρος καὶ ἅμα τὴν βλάστην ἀφήσιν εἰς τὸ ἄνω, δι' ὃ καὶ τὰ μὲν τέλεα τὰ δ' ἀτελεῖ τὰ δὲ μέλλοντα. Καὶ οὐκ ἐμποδίζεται τὰ κάτω διὰ τὴν ἐπιρροὴν καὶ τὴν ἀναφορὰν τὴν εἰς τὸ ἄνω. Καθάπερ γὰρ ὑποκείμενόν τι πᾶσιν ὁ καυλὸς ἐξ οὗ τὴν τροφὴν ἔχουσιν ὥσπερ ὀχετοῦ τινος. Ἡ μὲν οὖν ἄνθησις εὐλόγως χρόνιός τε καὶ ἀβλαβὴς αὐτοῖς ὑπὸ τῶν ὑδάτων· ἐν δὲ τοῖς ἄλλοις ὅταν ἀπανθήσῃ σχεδὸν ἐπισινέστερα τοῦ σίτου διὰ τὴν ἀσθένειαν καὶ μάλισθ' ὁ κύαμος, ἀσθενέστερον γάρ. Καὶ περὶ μὲν τῶν πρὸς ἄλληλα διαφορῶν τοσαῦτα εἰρήσθω.

[11.1] Περὶ δὲ τῶν ὁμογενῶν τάχα ἂν τις ἀπορήσειε τίποτ' οὐκ ἐν ἴσοις χρόνοις ἅπαντα τελειοῦται ἀλλ' οἱ μὲν τρίμηνοι τῶν πυρῶν οἱ δὲ δίμηνοι καὶ τῶν κριθῶν ὡσαύτως. Εἰ δὲ καὶ ἐν ἐλάττονί τινες χρόνῳ πλείων ἢ διαφορὰ πρὸς τοὺς χειμοσπόρους. Ὅμοίως δὲ καὶ ἐπὶ τῶν ἄλλων μάλιστα δὲ ἐπὶ τῶν εἰρημένων τάχα δὲ καὶ μόνων αἱ διαφοραί. Καὶ τοῦτ' εὐλόγως· τὰ μὲν γὰρ ὄσπρια σπαρέντα χειμῶνος οὐκ ἂν ὑπομείνειε διὰ τὴν ἀσθένειαν πλὴν εἴ τινων ὀλίγων. Ὅροβον γὰρ σπεύρουσι καὶ πρόϊον ὥστε μὴ ὥρα καταλείπεται· ἢ κριθὴ δὲ καὶ ὁ πυρὸς ἀμφοτέρως καὶ ὅσα μήτρην ἀπλὴν ἐλάττους καὶ ἀσθενεστέρους φέρει τοὺς στάχυν. Τοῦτο μὲν οὖν ὡς καθόλου τῷ γένει πρὸς τὸ γένος.

[2] Τὸ δὲ μὴ ἰσοχρονίους εἶναι κοινὸν καὶ ἐπὶ τῶν δένδρων· ἔστι γὰρ ἐν ἐκάστοις τὰ μὲν πρόϊα τὰ δ' ὄψια καθάπερ ἄμπελος, συκῇ, μηλέα, ἄπιος. Αἴτιον δ' ἐν ἀμφοῖν ὅτι τῆς ἰδίας φύσεως ἢ διαφορὰ τὸ δ' ὄνομα κοινόν, ὥσπερ καὶ ἐν τοῖς ζώοις ἐπὶ τῶν κυνῶν, οὐδὲ γὰρ ἐκεῖνο τὸ γένος ἔν. Ἡ δ' αἰτία παραπλησία καὶ διὰ τί τὰ μὲν πρόϊα τὰ δ' ὄψια. Εἴτε γὰρ θερμότης εἴτε ψυχρότης εἶθ' ὅτι ποτὲ καὶ ἐνταῦθ' ὁμοίως τὸ αἴτιον.

[3] Καὶ καθόλου μὲν οὕτω. Τοῖς δὲ σπέρμασι καὶ ἐμφανέστερον ἐκ τῶν συμβαινόντων τὸ αἴτιον. Ὁ μὲν γὰρ χειμοσπορούμενος πυρὸς πολύρριζος ὢν καὶ ἐνταῦθα πρῶτον ἀποδοὺς τὴν δύναμιν ἀποδίδωσι πλῆθος καλάμου, καὶ γὰρ πολυκάλαμος. Ὁ δὲ τρίμηνος καὶ δίμηνος ὀλιγόρριζος καὶ ὀλιγοκάλαμος δι' ὅτι τὴν τε ἀναφορὰν εὐθὺς ἄνω ποιεῖται καὶ τὴν τελείωσιν ταχεῖαν, ῥᾶον γὰρ τὸ ἔλαττον ἀποτελεῖσθαι· δι' ὃ καὶ ὁ μὲν πολύχους, ὁ δ' ὀλιγόχους καὶ κοῦφος. Ὁ δὲ βαρὺς ὥσπερ ἐλέγχθη πλείω τὴν τροφὴν ἔλκων καὶ θολερωτέραν ἢ δ' ἀναδρομὴ ταχεῖα κατὰ λόγον ἅτε καὶ μὴ χρονίζοντος ἐν ταῖς ρίζαις δι' ὀλιγότητα.

[4] Μέγα δὲ καὶ ἡ ὥρα συνεργεῖ· καὶ γὰρ ὁ πολύρριζος σπαρεῖς ἐν ταύτῃ θάττον ἀναβλαστάνει καὶ ὀλιγοκαλαμώτερος καὶ ὁ στάχυν μικρὸς καὶ

ὀλιγόπυρος. Ὁ δὲ τρίμηνος πρωῒσπορηθεὶς οὐκ ἂν ὑπομείναιε διὰ τὴν ἀσθένειαν. Ἄτοπον δὲ καὶ ὑπεναντίον τὸ συμβαῖνον εἰ βαρεῖς οἱ ὀλιγοχρόνιοι καθάπερ οἱ περὶ Αἰνόν φασι τοὺς ἰσημερίνους. Λοιπὸν γὰρ αἰτιᾶσθαι τὴν ἰδίαν φύσιν ἣν ὀρῶμεν ἐν πλείοσι μεγάλας ἔχουσαν διαφορὰς καὶ κατὰ τὴν ἔκφυσιν καὶ τελείωσιν καὶ κατὰ τὰς ἰδίας μορφὰς οἷον μεγέθους καὶ μικρότητος καὶ σχήματος· καὶ τὸ πολυάχυρον εἶναι καὶ μὴ κατωφελεῖ τὸ πρὸς ἡμᾶς κατὰ τροφήν καὶ σίτησιν.

[5] Τάχα δὲ καὶ τὰ γένη ποιοῦσιν αἱ χῶραι ἥτοι πάντα ἢ ἓνια· συνεξομοιοῦσι γὰρ πως ἑαυταῖς ἢ διαφορὰν γενῶν ἐμποιοῦσιν καὶ πρὸς τὸ χρήσιμον, ὥσπερ τῷ θρακίῳ πυρρῷ τὸ πολύλοπον εἶναι καὶ ὀψιβλαστῇ· διὰ τοὺς γὰρ χειμῶνας ἄμφω συμβαίνει. Καὶ διὰ ταῦτα καὶ ἐν ταῖς ἄλλαις πρωῒσπορούμενος ὁ θράκιος ὥσπερ διαβλαστάνει καὶ ἐξαύξεται καὶ πάλιν ὁ παρὰ τῶν ἄλλων ἐκεῖ σπειρόμενος ὥσπερ βλαστάνει· γέγονε γὰρ οἷον φύσις ἥδη τὸ ἔθος.

[6] Οἷον ἐν τοῖς Ἐπισυνάγгаῖς καλουμέναις τῆς Ἀσίας οἱ διαρρηγνύναι λεγόμενοι καὶ οἱ τὰ μεγέθη τοῖς πυρῇσιν ἴσοι χώρας ἰδιότητι καὶ φύσει τὰς δυνάμεις ἔχουσι ταύτας καὶ οὐκ ἂν τηροῖεν μετενεχθέντες. Ὁ γὰρ ἐπὶ τῶν ἀμπέλων λέγουσιν ὡς ὅσα χώρας εἶδη τοσαῦτα καὶ ἀμπέλων τοῦτ' ἀληθὲς καθόλου. Καὶ οὐχ ἦττον ἐφ' ἐτέρων ἐὰν ἅμα τῇ χώρᾳ καὶ τὸν ἀέρα τις προσθῇ. Διὰ τοῦτο γὰρ αἱ τε ἀνωμαλῖαι τῶν καρπῶν ἀπὸ τῶν αὐτῶν φυτευομένων αἱ θ' ὅλως ἀκαρπῖαι μὴ φεροῦσης τῆς χώρας.

[7] Ἐκ δυοῖν γὰρ ἢ καὶ πλείονων ὅταν γένηται τι δύναμιν ἐχόντων ἀνάγκη κατὰ τὰς τούτων διαφορὰς καὶ τὸ ὅλον διαφέρειν, ὃ καὶ ἐπὶ τῶν ζώων συμβαίνει· καὶ γὰρ καὶ τῷ ἄρρени καὶ τῷ θήλει καὶ τῇ χώρᾳ καὶ τῷ ἀέρι καὶ ἀπλῶς ταῖς τροφαῖς λαμβάνουσι διαφορὰς ὅθεν καὶ γενῶν ἰδιότητες γίνονται καὶ πολλάκις τὸ παρὰ φύσιν ἐγένετο κατὰ φύσιν ὅταν χρονισθῇ καὶ λάβῃ πλήθος. Ἀλλὰ γὰρ τοῦτο καθόλου μὲν καὶ κοινόν.

[8] Αἱ δὲ τῶν σπερμάτων διαφοραὶ γίνονται διὰ τὰς εἰρημένας αἰτίας· ἐπεὶ καὶ τοῦ θᾶπτον τελειοῦσθαι παρά τισιν, ὥσπερ ἐν Αἰγύπτῳ φασὶ μηνὶ πρότερον ἢ ἐν τῇ Ἑλλάδι, τὸν ἀέρα τις ἂν αἰτιάσαιτο μαλακὸν ὄντα καὶ εὐτραφεῖ· τὸ δ' ὅλον ἐν δυοῖν τούτοις θετέον τὰς αἰτίας ὥσπερ εἴρηται ἀέρι καὶ ἐδάφει. Τὸ γὰρ αὖ περὶ Μῆλον συμβαῖνον τῆς τελεώσεως ὥστε τὸν ὕστατον σπεῖροντα θερίζειν ἅμα τοῖς πρώτοις ἐπὶ τὴν χώραν ἀνοιστέον ὡς εὐτροφον, ὃ γὰρ ἀπὸ παραπλήσιος.

[9] Τὸ γὰρ μὴ ἰσοχρονεῖν τὰ σπέρματα καθάπερ καὶ τὰ ζῶα παρὰ πᾶσιν ὁποιασοῦν οὔσης τῆς χώρας οὐδὲν ἄτοπον. Ἐκεῖνα μὲν γὰρ ἐν ἑαυτοῖς ἔχει

τὰς ἀρχὰς τὰς κυριωτάτας τὸ δὲ σπέρμα καὶ ὅλως τὸ φυτὸν ἐν τῷ ἀέρι μᾶλλον. Εἰ δὲ μὴ τὴν γε πρὸς βλάστησιν καὶ ὅλως γένεσιν καὶ διαφθοράν. Διόπερ οἷον ἂν ἦ τὸ ἔτος ἀκολουθεῖ καὶ τὰ τῶν καρπῶν ἐν τε τοῖς ἄλλοις καὶ ἐν τῇ πρωϊότητι καὶ ὀψιότητι.

[10] Σύμφωνον δὲ τρόπον τινὰ καὶ οὐ πόρρω τούτων καὶ τὸ μὴ κινεῖσθαι πρότερον μῆτε σπέρμα μὴδὲν μῆτε φυτὸν ἀλλὰ κατὰ τὴν οἰκείαν ὥραν. Ὁ καὶ θαυμάζεται περὶ τῶν σπερμάτων ὅτι διαμένει πρὸς τὸ θέρος ἕνια καὶ οὐ διαφθείρεται πολλῶν ὑδάτων καὶ εὐδιῶν γενομένων. Ἐπεὶ τό γε μὴ διαβλαστάνειν ἥττον ἄλογον μὴ ἔχοντα τὴν οἰκείαν κρᾶσιν. Αἴτιον δὲ τούτου πως ὑποληπτέον, ἐς ἀσφαλὲς τῆς φύσεως πρὸς ἄμφω τιθεμένης ἐν τῇ τῶν περιεχόντων ἰσχύϊ· φαίνεται γὰρ τὰ μὲν ξυλώδη καθάπερ τὰ ἀνθικὰ τὰ δὲ πολυχίτωνα τὰ δ' ἄλλας τοιαύτας ἔχοντα φυλακάς. Καὶ ταῦτα μὲν δὴ κοινὰ πως τῆς φύσεως.

[12.1] Ὑπὲρ δὲ τῶν σπερμάτων πῶς ποτε τὰ τεράμονα ἢ ἀτεράμονα γίνεται πότερα διὰ τὴν χώραν ἢ διὰ τὸν ἀέρα καὶ τὰς ἰδίας διαθέσεις ἢ δι' ἄλλο τι πάθος καὶ πάντα ἢ ἕνια. Δοκεῖ γὰρ δὴ καὶ μάλιστα ἐπὶ τῶν κυάμων καὶ φακῶν συμβαίνειν, πολλάκις δὲ καὶ τὸ χωρίον ὅτε μὲν τεράμονα φέρειν ὅτε δὲ ἀτεράμονα τῆς αὐτῆς ἐργασίας τυγχάνον· καὶ τῶν συνεχῶν αὐλακος μόνον διειργούσης τὸ μὲν ἀτεράμονα τὸ δὲ τεράμονα· καὶ τῶν σπερμάτων ὅτε μὲν ἐκ τῶν ἀτεραμόνων τεράμονα γίνεσθαι ὅτε δ' ἐκ τῶν τεραμόνων ἀτεράμονα. Κατὰ δὲ τὴν ἔκφυσιν καὶ βλάστησιν καὶ τὴν ἀδρότητα καὶ εὐκαρπίαν οὐδὲν διαφέρει τὸ ἀτέραμον ὥσάν τι νενοσηκὸς ἢ πεπονηκός.

[2] Ὑπὲρ δὴ τούτων ἢ εἰ ἄλλο τι συνάπτει πρὸς τὴν ἀπορίαν ταύτην πρῶτον ἐκεῖνο λεκτέον ὅτι τὸ τεράμον καὶ ἀτεράμον πρὸς τὴν πύρωσιν λέγεται καὶ διάχυσιν καὶ ὥς ἀπλῶς εἰπεῖν πρὸς τὴν τροφήν τὴν ἡμετέραν. Τὸ μὲν γὰρ εὐδιάχυτον καὶ τῇ ἐψήσει ταχὺ ἀλλοιούμενον τεράμον τὸ δ' ἀδιάχυτον ἢ ἀναλλοιώτον ἢ βραδέως ἀλλοιούμενον ἀτεράμον. Τοιοῦτον δ' ἐκάτερον εἰ τὸ μὲν μανὸν εἶη καὶ μαλακὸν τὸ δὲ πυκνὸν καὶ σκληρόν· οὕτω (γὰρ) ἂν τὸ μὲν δέχοιτο τὴν θερμότητα καὶ ὑγρότητα δι' ὧν ἡ διάχυσις τὸ δ' οὐ δέχοιτο ἀλλ' ἀποστέγοι τῇ πυκνότητι καὶ σκληρότητι.

[3] Διηρημένου δ' οὕτω τοῦ τεράμονος καὶ ἀτεράμονος σκεπτέον παρὰ τίνος καὶ ποίας τινὰς αἰτίας ταῦτα συμβαίνει. Τὸ μὲν οὖν ἀπλοῦν ἐκεῖνο καὶ (νῦν) ἀληθὲς ὃ καὶ ἐπὶ τῶν πρότερον εἴρηται δι' ὅτι παρὰ τὴν τροφήν τὰ τοιαῦτα γίνεται πάντα τῷ ποιᾶν τε καὶ ποσὴν εἶναι. Μεθίστησι γὰρ αὕτη· συμβαίνει γὰρ τὰ μὲν ἐν τοῖς ἁλεινοῖς καὶ διακόπροις καὶ λεπτογείοις καὶ

ἡλιοβόλοις κούφην τε τὴν τροφὴν καὶ εὐκατέργαστον ἔχειν ὥστε καὶ τὰ ξυνιστάμενα μανὰ καὶ μαλακὰ γίνεσθαι. Διὰ τοῦτο γὰρ καὶ τὰ λήμνια τεράμονα δι' ὅτι τοιαῦτα τὰ ἐδάφη. Τὸ γὰρ ὅλον τὴν γῆν τεράμονά τινες καλοῦσι τὴν τοιαύτην, ἐν δὲ τῇ τεράμονί φασι γίνεσθαι (τεράμονα). Τεράμονα δὲ καὶ τὰ ἐν Αἰγύπτῳ διὰ τε τὸ ἔδαφος καὶ διὰ τὸν ἀέρα· τὸ γὰρ θερμὸν οἰκεῖον τῇ τεραμότητι καὶ ὅλως τῇ πέψει· δι' ὃ καὶ τὰ κοπριζόμενα προτερεῖν φασι τῶν ἀκοπρίστων σχεδὸν εἴκοσιν ἡμέραις.

[4] Τὰ μὲν οὖν ἐν τῇ ἀλεεινῇ καὶ κούφῃ διὰ ταύτας τὰς αἰτίας τεράμονα τὰ δ' ἐν τῇ ψυχρᾷ καὶ πείρᾳ καὶ γλίσχρᾳ καὶ ὥσπερ κεραμία καὶ ἔτι δὲ τῇ λειμωνίᾳ καὶ ἐφύδρῳ καὶ ἐλώδει πάντ' ἀτεράμονα διὰ τε τὸ πλῆθος καὶ τὴν ἰσχὺν τῆς τροφῆς πυκνά τε καὶ βαρέα καὶ σκληρὰ τοῦ γεώδους τε πολλοῦ καὶ τοῦ ψυχροῦ καταμιγνυμένων· ἡ γὰρ δὴ πῆξις καὶ ἡ πύκνωσις ἐκ τούτων ἐξ ὧν περ καὶ ἡ σκληρότης. Ἐν δὲ τοῖς ἐλώδεσι καὶ ἐφύδροις ἀχρεῖα τὸ ὅλον· οὐ γὰρ ἐνδιδοῖ βρεχόμενα δι' ὃ καὶ καταχρῶνται πρὸς τὰς ὕς. Αἱ μὲν οὖν ἐκ τῶν ἐδαφῶν αἰτίαι σχεδὸν αὗται.

[5] Ἐπεὶ δὲ καὶ τὰ ὕδατα τὰ οὐράνια καὶ ὁ ἀήρ συνεργεῖ ταῖς τροφαῖς διὰ τοῦτο ταῖς γε ἐπομβρίαις ἀτεράμονα μᾶλλον γίνεται πλέονος οὔσης καὶ ἀπεπτοτέρας τῆς τροφῆς. Σχεδὸν γὰρ τοῦτο συμβαίνει καὶ εἰ ἐκ τῆς τοιαύτης γῆς καὶ εἰ τοιαύτη τοῦ ἀέρος ἡ ψυχρότης ὥστε ἔνυδρός τις εἶναι καὶ μὴ πνευματική· πῆξιν γὰρ οὕτω ποιήσει καὶ πύκνωσιν. Διηρημένων δ' εἰς ταῦτα τῶν αἰτίων οὐδὲν κωλύει καὶ τὸ αὐτὸ χωρίον ὅτε μὲν τεράμονα φέρειν ὅτε δὲ ἀτεράμονα μὴ ὁμοίων ἀλλ' ἐναντίων γινομένων τῶν ἐκ διὸς καὶ τῶν διειργομένων αὐλακι τὰ μὲν τεράμονα τὰ δὲ ἀτεράμονα γίνεσθαι εἴπερ τοῦ μὲν τοιόνδε τοῦ δὲ τοιόνδε τὸ ἔδαφος.

[6] Ὡς περ γὰρ ἐν τοῖς μετάλλοις ῥάβδους οὕτως κἂν τοῖς ἐργασίμοις ὑπολαβεῖν χρή διατετάσθαι τὴν μὲν τοιάνδε τὴν δὲ τοιάνδε παρ' ἀλλήλας ὥστε τῶν αὐτῶν ἐκ τοῦ ἀέρος γινομένων ταῖς ἰδίαις δυνάμεσι ποιεῖν τὰς διαφοράς, ὅτε δὲ καὶ τοῦ αὐτοῦ χωρίου μικρόν τι μέρος εἶναι τοιοῦτον· ὡσαύτως δὲ καὶ εἴ τις ἀέρος ἢ πνεύματος προσπέσοι τοιαύτη ψυχρότης ὥστε ποιῆσαι πῆξιν ἢ καθ' ὅλον ἢ κατὰ μέρος. Ὁ καὶ κατὰ τὴν φθορὰν συμβαίνει τῷ τὰ μὲν παραλλάττειν τὰ δ' ἐπιβαίνειν. Καὶ εἴ τις ἐν αὐτοῖς τοῖς σπέρμασιν ἀνομοία διάθεσις ὑπάρχει· τὰ γὰρ ἀσθενέστερα δηλον ὡς εὐπαθέστερα, τὸ δ' ἀσθενὲς κἂν φύσει γίνοιτο τῷ λαμβάνειν τινὰ μεταβολὴν ἐν ἑαυτῷ.

[7] Δι' ὃ καὶ τῶν ἐπὶ τοῦ αὐτοῦ καυλοῦ κυάμων οὐδὲν κωλύει τῶν μὲν ἀτεράμονα τὸν λοβὸν εἶναι καὶ ἐν τῷ αὐτῷ λοβῷ καθάπερ τινὲς φασι εἶπερ

λέγουσιν ἀληθῆ· τὸν μὲν γὰρ ἀσθενέστερον εἶναι τὸν δὲ ἰσχυρότερον ἐνδέχεται. Τῆς δ' ἀσθενείας τοῦ κυάμου κάκεινο σημεῖον ἂν τις λάβοι· μόνος γὰρ δοκεῖ μεταβάλλειν τὴν χροάν ἐκ λευκοῦ μέλας.

[8] Ὅτι δὲ πῆξις τις καὶ πύκνωσις ἐστὶν ὑπὸ τοῦ ψυχροῦ δι' ἣν ἀτεράμονα γίνεται μαρτυρεῖ καὶ τὸ περὶ Φιλίππους συμβαῖνον περὶ τοὺς κυάμους· ἐκεῖ γὰρ σφόδρα ψυχροὶ ἄνεμοί τινες γίνονται· ἐὰν οὖν ἐν τοῖς ἀχύροις μὴ ἥλοημένοι ἐν τῇ ἄλφ κατατεθῶσιν οὐ μεταβάλλουσιν ἀλλὰ τεράμονες· ὅτε μὲν γὰρ ὑπὸ τῶν ἀχύρων ὅτε δ' ὑπὸ τῆς πρὸς ἀλλήλους συναφῆς σκεπάζονται καὶ ἅμα τῇ τῆς γῆς θερμότητι· ὅταν δὲ μετέωροι ληφθῶσι τό τε πνεῦμα μᾶλλον ἰσχύει καὶ οὐδαμόθεν ἐχόντων σκέπην εἰσδύεται καὶ πηγνυσιν· ἅμα δὲ καὶ ἀσθενέστατοι τότε γίνονται γυμνούμενοι πρῶτον τῶν ἀχύρων καὶ τῆς θερμότητος τῆς περιεχούσης. Αἱ δὲ μεγάλαι μεταβολαὶ μάλιστα κινουσιν.

[9] Ἐπιγενομένου δὲ χρόνου καὶ ὥσπερ ἥδη συνεστηκότων ἐὰν διῴκμῳ πάλιν μὴδὲν πάσχειν ὑπὸ τοῦ πνεύματος· ἰσχυρότερόν τε γὰρ ἥδη καὶ τὸ κέλυσος τὸ περιέχον. Τὸ δὲ πλείω χρόνον ἔαν ἥλοημένους ὑπαιθρίους ποιεῖν ἀτεράμονα ὥσπερ τινὲς φασιν οὐκ ἄλογον· ἀποψύχονται γὰρ δῆλον ὅτι μᾶλλον τοῦ συμμέτρου καὶ ἅμα κατασκληρύνονται. Ἀκόλουθον δὲ πως τοῦτο καὶ ὅτι τὸ μετὰ τὴν σπορὰν εὐθὺς ἐπιγινόμενον ὕδωρ ἀτεράμονας ποιεῖ· ἀσθενῇ γὰρ αὐτὸν λαβὼν ἐν τῷ διαβλαστάνειν ὄντα κατέψυξεν ὁ πρὸς μὲν τὴν φύσιν οὐκ ἔβλαπτε πρὸς δὲ τὴν ἔψησιν.

[10] Ἐν ἐτέροις δὲ καὶ δι' ἄλλα τῆς δυνάμεως οὔσης οὐκ ἄλογον τὸ μὲν ὑπάρχειν τὸ δὲ μὴ. Τό τε γὰρ ἀβλαστὲς καὶ ἄγονον ἢ καὶ δυσανξὲς ὅταν κακωθῇ πρὸς τὴν γέννησιν οὐκ ἄλογον. Οὐδ' ἐξ ἀτεραμόνων τεράμονα γίνεσθαι σπαρέντα πάλιν· ὑπὸ γὰρ τῶν αὐτῶν ἐναντίως διατιθεμένων ὥσπερ εἵπομεν οὐκ ἄλογος ἡ τεραμότης. Ὡστ' εἰ ὁ ἀῆρ καὶ τὰ ὕδατα καὶ τὰ ἐδάφη τοιαῦτα τί κωλύει καὶ τὰ σπέρματα μεταβάλλειν;

[11] Εἰ δὲ συμβαίνει τὰ μὲν τεράμονα μᾶλλον ἐνδεδωκέναι τὰ δὲ ἀτεράμονα περιτετάσθαι τῷ κελύφει καθάπερ τινὲς φασὶ καὶ καταχασμωμένων τὰ μὲν μεταβάλλειν τὴν χροάν τὰ δὲ μὴ καὶ τὰ ἐγγυλότερα θεριζόμενα τεραμονέστερα γίνεσθαι, καὶ γὰρ τοῦτο λέγουσιν, οὐθὲν ἄτοπον· ἢ τε γὰρ περίτασις σκληρότητος καὶ πῆξεως καὶ ἀδρύνσεως οὐθὲν δὲ τούτων ἀλλότριον τοῖς ἀτεράμοσιν. Τό τε μὴ ἀλλοιοῦσθαι καταπνεόμενα σημαίνει σκληρότητά τινα καὶ ἀπάθειαν, θάτερον δὲ τοῦναντίον· καὶ τὸ μὴ ἐγγυλα θεριζέσθαι σκληρότητα πλέω καὶ πῆξιν· τὸ δὲ ἄγαν σκληρὸν οὐκ εὐδιάχυτον.

[12] Ὁ καὶ ἐπὶ τῆς ἄλφ φασὶ τινες ἂν συμβῇ γίνεσθαι ἀτεράμονα οὐκ ἄγαν

τοῦτο γε λέγοντες πιθανόν. Ἡ γὰρ ἀπὸ τοῦ ἡλίου ξηρότης ἀχυλότερα μὲν ποιεῖ καὶ ἦττον ἡδέα εὐεψητότερα δὲ οὐδὲν ἦττον ἀλλὰ μᾶλλον. Τὰ γοῦν ἐρέγματα διηλιωθέντα θάττον διαχεῖται. Εἰ δ' ἄρα καὶ τοῦτ' ἀληθὲς οὐκ ἐναντιοῦται τοῖς πρότερον. Οὐδ' εἰ παλαιούμενα γίνεται μᾶλλον ἀτεράμονα· καὶ γὰρ οὕτω ξηρότερα συμβαίνει γίνεσθαι διὰ τε τοῦ περιέχοντος καὶ ὑπὸ τῆς διεκπνοῆς τοῦ θερμοῦ ὃ συνεξάγει καὶ τὸ ὑγρόν. Εὐλόγον δὲ καὶ θάττον καὶ μᾶλλον κόπτεσθαι τὰ τεράμονα· καὶ γὰρ γλυκύτερα, ταῦτα δὲ μᾶλλον ζωοποιεῖ, καὶ πεπεμμένα, μεταβολὴ δὲ καὶ τούτων θάττον. Καὶ ταῦτα μὲν ἂν ἔχοι τὰς εἰρημένους αἰτίας.

[13] Τὸ δὲ μόνον τῶν ὀσπρίων ἢ καὶ τοῦ παντὸς σίτου κύαμον καὶ φακὸν ἀτεράμονα γίνεσθαι ψευδὸς ὑποληπτέον ἀλλὰ μάλιστα διαπειρώμενοι τούτων διὰ τὴν χρεῖαν ταῦτα μόνον φαμέν ὅτι τοῖς μὲν ἀλήθοντες χρώμεθα τοῖς δ' ὅλοις· αὕτη δ' οὐ μικρὰ διαφορά· καὶ γὰρ ἐπ' ἐκείνων εἰ λεπτύνοντες οὐκ ἂν ὁμοίως ἔνδηλον ἦν. Ἐκφαίνεται γοῦν καὶ ἐπὶ τῶν ἐρεβίνθων καὶ τῶν ἄλλων ἐσπομένων ὅλων τὸ ἀτεράμον. Εἰ δ' ἀτεράμονα μόνον ταῦτα οὐδὲ τοῦτ' ἄλογον· ἀσθενέστερα γὰρ ὥς εἰπεῖν, τὸ δ' ἀσθενὲς παθητικώτερον. Ὁ δὲ λέγουσιν οἱ πολλοὶ ὅτι τὸ κερασβόλον ἀτεράμον γίνεται μὴ ποτ' ἄγαν εὐνθὲς ἢ· σκληρότερος γὰρ ὁ λίθος πρὸς ὃν πολλάκις προσπίπτει τὰ σπέρματα. Κἂν μὴ προσκόψη μηδὲ βουσὶν ἀροτριᾷ τις οὐδὲν ἦττον ἀτεράμον γίνεται. Περὶ μὲν οὖν τούτων ἱκανῶς εἰρήσθω.

[13.1] Ὅσα δὲ τῶν ὁμογενῶν μὴ ἅμα διαβλαστάνει τοῖς ἄλλοις ἀλλ' ὕστερον πολλῷ καθάπερ ἐλέχθη περὶ τοῦ τευτλίου παραπλησία τις ἢ αἰτία ταύτη καθάπερ εἰπομένον ἐστίν· ὥσπερ γὰρ πρὸς ἔψησιν καὶ ὅλως πύρωσιν ἀτεράμονα, καὶ πρὸς ἐκφυσιν οὕτω καὶ πρὸς βλάστησιν· ἢ γὰρ τοιαύτη ἀτέλειά τις τῶν σπερμάτων. Ὅμοιως δὲ ἐπὶ πάντων ὧν τοῦτο συμβαίνει. Περὶ μὲν οὖν τούτων ἐπισκεπτέον.

[2] Περὶ δὲ τοῦ ἰσχυρότερα καὶ εὐχυλότερα γίνεσθαι καὶ νοστιμώτερα ἢ ἀνοστώτερα καὶ πρὸς τὴν σίτησιν βελτίω ἢ χεῖρω τὰ μὲν τοῖς τόποις διαφέρει καθάπερ εἴρηται τῷ ξηρότερα ποιεῖν καὶ πυκνότερα καὶ ξυνεστηκότα μᾶλλον οἷον τὰ ὀρεινὰ τῶν πεδεινῶν καὶ ἔτι μᾶλλον τῶν ἐπόμβρων· εὐπνούστερά τε γὰρ καὶ ἐν τροφῇ συμμετρότερα. Νοστιμώτερα δ' ἐκ τῆς αὐτῆς παρὰ τὴν τοῦ ἀέρος κρᾶσιν· οὐ γὰρ πάντως ὅταν πλεῖστος καὶ ἀδρότατος γένηται καὶ νοστιμώτατος ἀλλ' ἐτέραν δεῖ διάθεσιν ἔχειν.

[3] Δοκεῖ δὲ μεγάλα συμβάλλεσθαι καὶ ἡ σκάλσις πρὸς τὸ νοστιμώτερον ποιεῖν καὶ τὸ ἐγχυλότερα θερίζειν· ἐξαναλωθέντος γὰρ παντὸς τοῦ ὑγροῦ καὶ

χειρώ πρὸς τὴν σίτησιν καὶ ἐλάττω. Τὰ δ' ὄσπρια θερίζουσιν ἐγχυλότερα καὶ πρὸς τὸ δύνασθαι συλλέγειν, ξηρανθέντα γὰρ καταρρεῖ. Τὸν δὲ θερμόν ἤδη λήγοντος τοῦ θέρους ἀνυγραιομένου τοῦ ἀέρος κατὰ τὸ ἐωθινόν· ἂν γὰρ πρότερον θίγη τις ἐκπίπτει καὶ οὐκ ἔστι λαβεῖν. Καὶ ταῦτα μὲν ὡς γεωργικά.

[4] Τὰ δὲ τῆς φύσεως οἶον τὸ ἀδρύνειν τὰ πνεύματα καὶ τὸ βόρεια μᾶλλον καὶ ὅλως ἂ ἐκάστοις ψυχρὰ καὶ τάναντία δὴ φθείρειν καὶ ὅσα δὴ τοῖς ὕδασιν ἢ τοῖς πνεύμασιν ἀπόλλυνται τοῖς παρώροις, ὥσπερ ἐλέχθη περὶ ἐρεβίνθων τῶν ἀνθούτων. Ὁ δὲ κύαμος ἐὰν πνεῦμα ἐπιγένηται λαμπρὸν καὶ ὁ πυρὸς καὶ ἡ κριθὴ καὶ ἀπηνθηκότα ὑγρὰ δ' ἔτι ἂν ληφθῇ· διαπνεῖται γὰρ καὶ κοπτόμενα πρὸς ἄλληλα κενοῦται. Τελευσμένων δὲ ἐπιγινόμενον ὕδωρ ἐναντίως τὴν μὲν κριθὴν βλάπτει τὸν δὲ πυρὸν ὠφελεῖ μᾶλλον· καὶ γὰρ γυμνὴ καὶ τὸ ὅλον ἀσθενὴς, ὁ δὲ καὶ ἐν χιτῶσι καὶ πυκνότερον καὶ ἰσχυρότερον ὥστε τὴν μὲν ὀλίγης δεῖσθαι τροφῆς καὶ σχεδὸν τῆς ἀπὸ τοῦ ἀέρος μόνης τὸν δὲ πλείονος·

[5] ἔτι δὲ ἰσχυρότερος ὢν καὶ κατακρατεῖ καὶ συμπέττει μᾶλλον καὶ τὸ ὅλον οὐδὲ πολλὴν δέχεται διὰ τὴν πυκνότητα καὶ τοὺς χιτῶνας, ἡ δὲ πλείω τε ἔλκει μανὴ τὴν φύσιν οὕσα καὶ ταύτην οὐ καταπέττει δι' ἀσθένειαν καὶ ὑγρᾶς γενομένης ὁ ἥλιος ἅμα τῇ ἐπιγενομένη συνεξάγει τὴν οἰκείαν ὑγρότητα συνεφελκομένην. Καὶ τὰ πνεύματα δὲ κόπτοντα φθείρει μᾶλλον διὰ τὴν ἀσθένειαν.

[6] Ἀπορεῖται δὲ καὶ διὰ τί ἀδροῦ ὄντος τοῦ σίτου καὶ σχεδὸν ὥσπερ ξηροῦ ἐφυσθεὶς οὐχ ὅτι βελτίων ἀλλὰ καὶ χειρὼν γίνεται, ἐὰν δὲ θερισθεὶς εἰς θωμοὺς συντεθῇ ἀδρότερος καὶ βελτίων· ἔνιοι δὲ καὶ ραίνουνσιν. Αἴτιον δὲ ὅτι τότε μὲν ἀνυγραίνεται καὶ ὁ ἥλιος ὅταν ἀναλάμψη συνεξάγει τὴν οἰκείαν ὑγρότητα καὶ ἰσχάνει· ὅταν δὲ εἰς θωμοὺς συντεθῇ συνικμάζεται τι καὶ ἡ ἀναγομένη ἀτμὶς λεπτὴ καὶ πνευματώδης οὕσα παρεισδύεται καὶ ἀδρύνει τοὺς ὄγκους.

[7] Ταῦτό τε τοῦτο συμβαίνει καὶ ὅταν εἰς τὰ οἰκία τεθῇ χύδην, δι' ὃ καὶ τὸ ἐπίμετρον ποιεῖ· τὸν γὰρ ἀτμὸν τὸν ἀνιόντα λεπτὸν ὄντα δέχεται καὶ διὰ τοῦτο εἰς βάθος καταβάλλουσιν ὅπως πλέον ἀνίη· πάντα δὲ ταῦτα διασημαίνει καὶ ἔτι πρὸς τούτοις ἡ ἐμβαλλομένη γῆ καὶ ἄκοπον παρέχουσα καὶ ἀνοιδίσκουσα ὅτι δύναται τινα δι' αὐτῶν ἔλκειν τροφὴν ἄνευ τῶν ρίζων, ὅθεν καὶ ἡ ὑπὸ τῶν πνευμάτων καὶ τοῦ ἀέρος οὐκ ἄλογος.

[14.1] Τὸ δὲ τῆς ἐρυσίβης κοινὸν οὐχ ἦττον ἀλλὰ μᾶλλον ἄπτεται τῶν σιτωδῶν, κριθῆς δὲ μᾶλλον ἢ πυροῦ διὰ τε τὸ γυμνοτέραν εἶναι τὸν δ' ἐν χιτῶσι πλείοσι καὶ διὰ τὸ ἐγγυτέρω τοῦ στάχους ἔχειν τὸ φύλλον ὅθεν ἡ

ἀπόχυσιν ἐν ᾧ μένει καὶ ἡ ὑγρότης ὥστε σαπεῖσα μᾶλλον ἄπτεται· καὶ ἔτι τὸν στάχυν ὀρθὸν εἶναι καὶ πυκνότερον· ἀπορρεῖ γὰρ ἦττον δι' ὃ καὶ ἐπικύπτειν ξυμφέρει· καὶ ἀπολλύει τὸ συνεχές θᾶττον, ἐν δὲ τῷ μανῶ πρὸς τοῖς ἄλλοις καὶ διεκπίπτει ἡ ὑγρότης. Ἡ δ' αὐτὴ αἰτία καὶ τῇ λευκῇ πρὸς τὰς ἄλλας, ἅπαντα γὰρ μάλιστα ἔχει τῶν ἄλλων.

[2] Τῶν δ' ὀσπρίων μάλιστα ἐρυσιβᾶ κύαμος καὶ διὰ τὸ πολύφυλλος εἶναι πολλαχόθεν καὶ διὰ τὸ πυκνοσπορεῖσθαι καὶ διὰ τὸ τὴν ὑγρότητα μάλισθ' ἔλκειν εἰς ἑαυτὸν διὰ τὴν μάνωσιν καὶ ἔτι διὰ τὸ πρὸς τῇ γῇ μάλιστα τὸν καρπὸν ἔχειν· σήπεται γὰρ μάλιστα τὰ κάτω διὰ τὴν ἄπνοϊαν. Καὶ ὅλως δὲ τῶν χεδροπῶν τὰ τοιαῦτα.

[3] Ἐρυσίβη δὲ σῆψις τίς ἐστὶ τοῦ ἐφισταμένου ὑγροῦ, δι' ὃ πολὺ μὲν ὕσαντος οὐ γίνεται, καταπλύνεται γάρ· ἐὰν δὲ ψεκάδες ἢ καὶ δρόσοι πλείους γένωνται καὶ ὁ ἥλιος ἐπιλάβῃ καὶ ἄπνοια τότε σήπεται· δι' ὃ καὶ ἐν τοῖς εὐπνοῖς καὶ μετεώροις ἦττον ἐν δὲ τοῖς κοίλοις καὶ δροσοβόλοις μᾶλλον. Καὶ πανσελήνοις δὲ μᾶλλον ὅτι συνεργεῖ καὶ ἡ τῆς σελήνης θερμότης καὶ ὅλως ὁ ἀῆρ ὑγρότερος.

[4] Πάντων δ' ἐπικηρότατον ὁ πίσος· πρὸς μὲν τὰς ἐρυσίβας ὅτι πολύφυλλον καὶ χαμαισχιδές καὶ εὐαυξές· συμπληροῖ γὰρ τὸν τόπον κᾶν ἄραιος ἦ· πρὸς δὲ τὰ ψύχη καὶ τοὺς πάγους ὅτι ἀσθενόρριζον. Σκωληκοῦται δὲ μάλιστ' ἢ μόνον πυρὸς καὶ ἐρέβινθος, οὐκ ἐν τοῖς αὐτοῖς δὲ ἑκάτερος, ἀλλ' ὁ μὲν ἐν τῷ καρπῷ ὁ δὲ ἐν ταῖς ρίζαις, ἄμφω δὲ διὰ γλυκύτητα. Ὁ μὲν ἐρέβινθος ὅταν ἡ ἄλμη περιπλυθῇ καθάπερ εἴρηται, ὁ δὲ πυρὸς ὅταν ἡ ρίζα ὑγρανθῇ.

[5] Ζωοποιεῖ δὲ σηπόμενα τὰ γλυκέα· γλυκύτερον γὰρ ὁ πυρὸς κριθῆς δι' ὃ καὶ τὸ ἄχυρον ἥδιον. Ὁ δὲ σκώληξ γινόμενος ὅταν ἐξαναλώσῃ τὴν ἐν τῷ καλάμῳ τροφήν αὐτὸς ἢ ὥστε ὅλον ἐξαπολλύναι τὸν στάχυν ἢ κατὰ θάτερον μέρος. Ταῦτα μὲν οὖν καὶ τὰ τοιαῦτα καθάπερ νοσήματος ἔχει χώραν ὧν οὐ χαλεπὸν τὰς αἰτίας ἰδεῖν.

[15.1] Περὶ δὲ τῶν θερινῶν σπερμάτων οἷον σησάμου, ἐρυσίμου, κέγχρου, ἐλύμων, ἐπὶ τοσοῦτον μὲν εἰπεῖν ἐστὶ παντὶ πρόχειρον ὅτι δι' ἀσθένειαν ταύτην τὴν ὥραν σπείρεται καὶ διὰ τὸ ταχὺ τελεοῦν· ἡ δὲ φύσις αὐτῶν ποία τις ἂν εἴη σκεπτέον· οὐδὲ γὰρ γεώδης ὥσπερ τῶν ὀσπρίων οὔτε πάντῃ κούφη· τὸ γὰρ σήσαμον λιπαρὸν καὶ δεόμενον πέψεως. Καὶ τοῦτο μὲν μονόρριζον ὁ δὲ κέγχρος καὶ πολύρριζον καὶ βαθύρριζον καὶ πολυκάλαμον ὥστ' εἰς ἀμφοτέρα μεριζομένης τῆς τροφῆς καὶ τῆς δυνάμεως χρονιώτερον ἐχρῆν

εἶναι. Τὸ γὰρ σήσαμον ἐπεὶ μονόρριζον καὶ βαθύρριζον ἄνω πᾶσαν ἀφίησι τὴν δύναμιν· ἀλλ' ἀντίκειται τούτῳ τὸ λιπαρόν· τὰ γὰρ αὖ γλίσχρα πλείονος πέψεως δεῖται. Ταῦτα δ' ὥσπερ εἴρηται πάντα πολύκαρπα. Περὶ μὲν οὖν τούτων σκεπτέον.

[2] Ἐπεὶ δ' ὅλως εἰπεῖν τὰ μικρόκαρπα πολυκαρπότερα καθάπερ τὰ τε νῦν εἰρημένα καὶ οἱ φακοὶ δὴ καὶ ὅσα τοιαῦτα καὶ ἐπὶ πᾶσι τὰ πολυχούστατα λεγόμενα κύμινόν τε καὶ μήκων καὶ ὅλως δὴ τὰ λαχανώδη πάντα καὶ τὰ ἐναγγειόσπερμα πολύχοα τίς ἂν οὖν αἰτία τούτων εἴη; πότερον ὅτι τὰ μικρὰ ῥῆον ποιῆσαι· καὶ γὰρ ζῶα φαμεν ἔνια τοιαῦτα καὶ μάλιστα δὴ τὰ ὠτοκόκα καὶ σκωληκοτόκα· ἢ αὕτη μὲν ἔξωθεν ἄλλην δέ τινα οἰκειοτέραν ζητητέον; ἐπεὶ καὶ τῇδε διαφέρει τῶν περὶ τὰ ζῶα· τῶν μὲν γὰρ ἐκτρέφει τὰ ὠὰ καὶ τελειοῖ καὶ ὅλως ζωογονεῖ τὸ περιέχον ὥσπερ καὶ ἐν τοῖς πρότερον εἴρηται. Τῶν δὲ καρπῶν ἐν αὐτοῖς τοῖς φυτοῖς ἢ ἐκτροφή καὶ τελείωσις ὥστε πλείονος δεῖ δυνάμεως.

[3] Πρὸς δὲ θησαυρισμὸν ἄριστα μὲν κέγχρος καὶ ἔλυμος καὶ σήσαμον καὶ θέρμος καὶ ἐρέβινθος, τὰ μὲν ὅτι πολυχίτωνα καὶ ξηρὰ, τὸ δ' ὅτι λιπαρὰ, ὁ δὲ θέρμος καὶ ὁ ἐρέβινθος ὅτι πικρότητά τινα ἔχουσι καὶ δριμύτητα. Διατηροῦσι δ' αὗται τὸ ἀπαθὲς ὥσπερ εἴρηται ὅθεν καὶ διαφθειρόμενα (μόνα) τῶν σιτωδῶν οὐ ζωοῦνται καθάπερ οὐδὲ τὰ τῶν λαχάνων· καὶ γὰρ ταῦτα ἄζωα καὶ ὅσα δὴ τῇ ξηρότητι ἢ τῇ δριμύτητι.

[4] Συμβαίνειν γὰρ ὥσπερ ἀνάμιξιν τινα γίνεσθαι τοῦ ἔξωθεν. Σηπόμενον δὲ ἕκαστον ἴδιον γεννᾷ ἐκ τῆς οἰκείας ὑγρότητος οἷον οἱ μὲν πυροὶ καὶ αἱ κριθαὶ τοὺς κίας ὁ δὲ κύαμος τὸν ὑπὸ τινων καλούμενον μίδαν· ὡσαύτως δὲ καὶ οἱ φακοὶ καὶ αἱ ἀφάκαι καὶ πίσοι καὶ ἄλλα. Τὸ δὲ αἴτιον κοινὸν πλειόνων· οὐ γὰρ μόνον ἐν τοῖς καρποῖς ἀλλὰ καὶ ἐν τοῖς δένδροις καὶ μετὰ ταῦτα τοῖς ξύλοις· καὶ ὅλως ὅσα τῶν ἀψύχων ζωογονεῖται διαφόρους ποιεῖ πάσας τὰς μορφὰς ὡς ἂν ἐξ ἐτέρας ὕλης.

[16.1] Ὁ δὲ κονιορτώδης σῖτος θάπτον σήπεται καὶ ὁ ἐν τοῖς κονιατοῖς ἢ ἀκονιάτοις οἰκήμασι διὰ τὸ πλείω θερμότητα ἔχειν. Καὶ γὰρ ὁ κονιορτὸς θερμὸς ἅτε ξηρὸς ὢν καὶ τὸ κονίαμα ὅταν ἀναδέξῃται τηρεῖ τὴν θερμότητα· ἐπεὶ καὶ ἄθροος καὶ κατὰ βάθους ὢν, πλείων γὰρ ἢ θερμότης. Θάπτον δὲ πολὺ κόπτεται κριθὴ πυροῦ διὰ τὸ μανότερον εἶναι καὶ γυμνότερον. Τάχιστα δ' ὁ κύαμος· θερισθεὶς γὰρ εὐθὺς καὶ συντεθεὶς ἐνιαχοῦ καθάπερ ἐν Θετταλίᾳ.

[2] Φαίνεται δὲ κατὰ τοὺς τόπους. Παρ' ἐνίοις γὰρ ἀσηπτότατος ὥσπερ ἐν ταῖς ἱστορίαις εἴρηται περὶ Ἀπολλωνίαν καὶ περὶ Τάραντα. Καὶ

ἀναπληροῦσθαι δέ φασι κοπέντα. Τοῦτο μὲν οὖν σκεπτέον. Ἀκόπως δὲ ἔχει τάδε· θερμός, κέγχρος, αἰγίλωψ, αἶρα, σήσαμον, ἐρέβινθος καὶ ὄλως τὰ δριμέα. Ὁ μὲν οὖν αἰγίλωψ πολυχίτων, ἢ δ' αἶρα γυμνή, δι' ὃ καὶ ἄλλη τινὶ δυνάμει. Τὸ δ' ὄλον ἄκοπα τὰ μὲν ξηρότητι δι' ὃ καὶ ἡ κάχρυσ χρονιώτερον, τὰ δὲ ἀμιξία καὶ καθαρότητι καθάπερ ὁ χόνδρος, τὰ δὲ χυμῶν φύσει καὶ δυνάμει φυσικῇ καθάπερ ἐρέβινθος, θερμός, σήσαμον, τὰ δὲ τῷ πολὺ τὸ ἀποστέγον ἔχειν ὥσπερ ὁ ὄχρος, ἅμα δὲ τοῦτό γε καὶ ξηρὸν καὶ θερμόν. Τῷ δὲ σίτῳ κοπέντι βοήθεια ταχίστη τὸ εἰς τὴν ἄλω φέροντας ἀπικμῆσαι. Καὶ τούτων μὲν σχεδὸν ἐνταῦθά που τὸ αἷτιον.

[3] Ὁ δὲ παρά τινων ζητεῖται διὰ τί ποτε ὁ κεκομμένος σῖτος καὶ παλαιὸς ὕδατος μὲν ἐπιχειομένου θερμοῦ διαβλαστάνει, - ταύτην γὰρ δὴ διάπειραν λαμβάνουσιν εἰ φύσιμος ὅταν ἐμβάλλοντες εἰς σκαφίον ἐπιχέωσι, - σηπόμενος δ' οὐ διαβλαστάνει, - καίτοι ἡ σῆψις ὑπὸ θερμοῦ καὶ ἐν ὑγρῷ ἐστι, - κομιδῇ δόξειεν ἂν παρ' ὁμωνυμίαν εἶναι. Διαφέρει γὰρ ἢ τε φθαρτικὴ καὶ ἡ γόνιμος θερμότης καὶ ἡ ὑγρότης δὲ ὡσαύτως. Ἔστι δ' ἡ μὲν σήπουσα ἀλλοτρία καὶ φθαρτικὴ, ἡ δὲ τοῦ ὕδατος τοῦ θερμοῦ συμμετρίαν τινὰ ἔχουσα· δεῖται γὰρ τοιαύτης πρὸς τὴν βλάστησιν.

[4] Ἐπεὶ τρόπον τινὰ παρόμοιον καὶ εἴ τις ἀποροίη διὰ τί ἡ θερμότης καὶ ἡ ὑγρότης καὶ ὑγείαν ἐν τοῖς σώμασι ποιοῦσι καὶ νόσον· δηλὸν δ' ὥς οὐχ αἱ αὐταὶ ἀλλ' ὥς ἕτεραι καὶ ἐναντίαι. Θερμὸν δ' ἐπιχέουσι διὰ τὴν ἀσθένειαν τῶν σπερμάτων ὅπως μὴ καθάπερ ἐκπαγῇ διὰ τε τὸ θᾶττον ἀποδηλοῦν· ἐπεὶ οἱ γε μὴ παντελῶς διεφθαρμένοι καὶ ἐν ψυχρῷ διαβλαστάνουσι. Συμβαίνει δὲ καὶ κόπτεσθαι καὶ σήπεσθαι δι' ἀλλοτρίας θερμότητος.

Liber V

[1] Τῶν δ' ἐν τοῖς δένδροις καὶ φυτοῖς τὰ μὲν αὐτόματα γίγνεται, τὰ δὲ ἐκ παρασκευῆς καὶ θεραπείας, ἐκάτερα δὲ αὐτῶν ἔχει διαίρεσιν· τῶν γὰρ αὐτομάτων τὰ μὲν ἐστὶ φύσει, τὰ δὲ παρὰ φύσιν· καὶ γὰρ ἐν τοῖς φυτοῖς ὑπάρχει τι τοιοῦτον ὥσπερ καὶ ἐν τοῖς ζώοις· οἷον ἐάν τι μὴ τὸν οἰκεῖον ἐνέγκῃ βλαστὸν ἢ καρπὸν ἢ μὴ κατὰ τὴν τεταγμένην ὥραν ἢ μὴ ἐκ τῶν εἰωθότων μερῶν ἢ τι τοιοῦτον ἕτερον· ἅπαντα γὰρ ταῦτα παρὰ φύσιν· τῶν δὲ ἐκ τέχνης καὶ θεραπείας τὸ μὲν ἐστὶ συνεργοῦν τῇ φύσει πρὸς εὐκαρπίαν καὶ πλῆθος, τὸ δὲ εἰς ιδιότητα καὶ τὸ περιττὸν τῶν καρπῶν, οἷον τὸ ποιῆσαι βότρυν ἀγίγαρτον ἢ ἐκ τοῦ αὐτοῦ κλήματος μέλανα καὶ λευκὸν φέρειν ἢ καὶ ἐν αὐτῷ τῷ βότρυνι καὶ ὅσα δὴ τοιαῦθ' ἕτερα ποιοῦσι, πλείω γὰρ ἐστίν· [2] περὶ μὲν οὖν τῶν κατὰ φύσιν καὶ τῶν συνεργούντων τῇ φύσει πρότερον εἴρηται· περὶ δὲ τῶν παρὰ φύσιν καὶ ὅσα πρὸς τὸ περιττὸν ἦκει νῦν λεκτέον καὶ πρῶτον μὲν ὑπὲρ τῶν παρὰ φύσιν ἢ ὄντων δοκούντων· καὶ γὰρ τούτων ἐστὶ τις αἰτία καθάπερ ἐν τοῖς ζώοις· οἷον ὅσαι πάρωροι καρποτοκίαι καὶ μὴ ἐκ τῶν αὐτῶν μερῶν γίνονται· λέγω δ' οἷον εἴ ποτε συκὴ κατὰ χειμῶνα τοῦ ἥρος ὑποφαίνοντος ἤνεγκε καρπὸν καὶ ρόα καὶ ἄμπελος ἐκ τῶν ἀκρεμόνων καὶ ἐκ τοῦ στελέχους καὶ εἰ δὴ τι παραπλήσιον τουτοισί·

[3] πρὸς δὴ ταῦτα λαβεῖν δεῖ πρῶτον ὅτι συμβαίνει τὰ τοιαῦτα τοῖς πολυκάρποις καὶ ὑγροῖς οἷον ἀμπέλῳ καὶ τοῖς εἰρημένοις· ἅπαντα γὰρ ταῦτα ὑγρὰ καὶ πολύκαρπα· ξηρῷ δ' οὐδενὶ καὶ ὀλιγοκάρπῳ. Δεύτερον δὲ πρὸς τε τὰς βλαστήσεις καὶ καρποτοκίας τὰς παρώρους ὅτι πάντων ἔχουσί τινας ἀρχὰς ἐν αὐτοῖς βλαστητικὰς ἢ κλῶνες ἢ πτόρθοι ἢ ἀκρεμόνες ἢ ὅτι χρὴ καλεῖν τὰ ἐσχατεύοντα τῶν δένδρων· οὐδὲν γὰρ ἐπὶ πᾶσι κοινόν, ἀλλ' ἓνια προσηγορίας τινὰς ἔχει καθάπερ θαλία, κράδη, κλήμα· καλοῦσι δέ τινες καὶ κλῶνας.

[4] Ὅτι δὲ ἔχουσιν ἀρχὰς τινας τοῦ βλαστάνειν φανερόν ἐκ τῶν καταπηγνυμένων ἃ πολλάκις ἀρριζώτων ὄντων τῶν κάτω μεθίησι βλαστὸν. [Οἷον κλήματα καὶ κράδαι καὶ ἐλάας χάρακες] ἐνίοτε δὲ καὶ μὴ καταπαγέντα, ἀλλ' ἀφηρημένα καθάπερ τὰ τε κλήματα καὶ τὰ τῆς ἐλάας ξύλα. Τρίτον δ' ὅτι συμβαίνει τὴν πάρωρον βλάστησιν γίνεσθαι χειμῶνων μαλακῶν ἢ νοτίων γενομένων· ἐκ τούτων γὰρ οὐκ ἂν δόξειεν ἄλογον εἶναι τὸ συμβαῖνον ἡθροισμένης τῆς γονίμου δυνάμεως καὶ ὑγρότητος ὅτε μὲν καθ' αὐτήν, ὅτε δὲ λειπομένης τῆς· ἔμπροσθεν, ἀφ' ἧς ὁ καρπὸς ἦλθεν. Ὡσπερ συμβαίνει καὶ ἐπὶ

τῆς συκῆς. Ὑπολειπομένης γὰρ πλείονος τῆς τοιαύτης ὑγρότητος ὅταν ἀῆρ ἐπιγένηται μαλακὸς καὶ ὑγρὸς καὶ θερμὸς, ἐξεκαλέσατο τὴν βλάστησιν.

[5] Ὅτι δὲ τοῦτο συμβαίνει φανερὸν εἰ ἐκ τούτου τοῦ μέρους ὁ καρπὸς ἀνίεται ὅθεν καὶ οἱ πρόδρομοι. Τάχα δὲ καὶ οἱ πρόδρομοι διὰ τὴν μαλακότητα τοῦ ἀέρος προτεροῦσί τε καὶ πέττονται μᾶλλον· εἰ δ' ἄρα μὴ τοῦτο, ἀλλὰ τᾷλλὰ γε πάντα διὰ τὰς αὐτὰς καὶ παραπλησίας αἰτίας ἐστὶν ἥτοι γενομένων τινῶν ὑπολειμμάτων ἢ καθ' αὐτὰ συνισταμένων ἀμφοῖν·

[6] οὐκ ἄλογον δὲ, οὐδ' ἕτερον· προϋπάρχει γὰρ ἡ τοῦ δένδρου πρὸς ἄμφω φύσις ὑγρά τις οὔσα καὶ πρόβλαστος ὥστ' ἂν εὐδαίῃ πλείω χρόνον ἐπιγέωνται καὶ τοῦ χρώματος ποιεῖν τὴν μεταβολήν· ἐπεὶ τὸν γε χυλὸν οὐ δύναται πέττειν οὐδαμῶς, ἀλλ' ἡ φαντασία σχεδὸν γίνεται κατὰ τὴν χροάν. Οἱ δ' ὀλυνθοὶ συνεργοῦσης ἤδη τῆς ὥρας πεπαίνονται μέχρι τινός· ἔτι δ' οὐτοί γε κατὰ φύσιν πῶς εἰσιν. Αἰ γὰρ γίνονται τὴν αὐτὴν καὶ τεταγμένην ὥραν ὥσπερ καὶ ὁ τῶν διφόρων συκῶν λεγομένων καρπός·

[7] ἀλλ' ἐπὶ τοσοῦτον τὸ ὅμοιον ληπτέον ὅτι παραπλησία τις ἡ αἰτία πάντων ἐκ τοῦ συνίστασθαι τὴν τοιαύτην ὑγρότητα καὶ δύναμιν δι' ὃ καὶ ὀπισθεν τοῦ φύλλου πάντα ταῦτα γίνεται καὶ οὐχ ὥσπερ τὸ σῦκον ἔμπροσθεν· ἀλλ' αἱ μὲν φύουσαι τοὺς προδρόμους ἀσθενέστεραι τυγχάνουσιν ὥστε οὐδ' ἐπιμένειν δύνανται τῆς βλαστήσεως γινομένης ἐκεῖσε·

[8] ὅλως δὲ πολυειδές τι τὸ τῶν συκῶν ἐστίν· αἱ μὲν γὰρ ὀλυνθοφόροι μόνον σῦκα δ' οὐ φέρουσιν οἷον αἱ τοὺς λευκοὺς ὀλύνθους φέρουσαι τοὺς ἐδωδίμους. Ἑτεραι δὲ φέρουσι καὶ σῦκα καὶ ὀλύνθους μέλανας, ἀβρώτους δὲ τούτους ἢ καὶ ἐδωδίμους φέρουσαι δὲ τὸν ὀλυνθον ὀπισθεν τοῦ θρίου· γίνονται δ' ἐν αὐτοῖς καὶ ψῆνες· αἱ δ' ὅλως οὐ φέρουσιν ὀλύνθους. Πάλιν δὲ τοὺς προδρόμους αἱ μὲν φέρουσιν οἷον ἢ τε λακωνικὴ καὶ λευκομφάλιος καὶ ἕτεραι πλείους, αἱ δ' οὐ φέρουσιν· τῶν δὲ φερουσῶν οὐ συνεχῆς, ἀλλὰ παραλλάττουσα ἢ φορὰ κατὰ τὴν διάθεσιν. Ὅτε μὲν γὰρ ἦνεγκαν, ὅτε δ' οὐκ ἦνεγκαν, ἐὰν δὲ κακῶς οὐκ ἦνεγκαν.

[9] Φέρουσι δὲ οὐ παρ' αὐτὸ τὸ θρίον μόνον, ἀλλὰ καὶ κατωτέρω πολὺ καὶ ἔνιαι γε ἐκ τῶν παχέων σφόδρα· συμβαίνει δὲ ἐνίους καὶ ἐκπέττειν τινὰς τῶν ὕστερον· οὐ γὰρ ἅμα πάντα, ἀλλὰ τοὺς μὲν πρότερον φέρουσι, τοὺς δὲ μικρῶ πρό τῶν ἐρινῶν· ἐγγύτεροι δὲ οὗτοι τοῦ βλαστοῦ καὶ τῶν σύκων· ἀποπίπτουσι δ' ἐκεῖνοι πρότερον καὶ ἥττον ἐκπέττονται· τὰ μὲν οὖν συμβαίνοντα ταῦτ' ἐστίν, οὐκ ἀλόγως δ' ἂν δόξειεν οὐδέν.

[10] Τὸ γὰρ μὴ πάσας φέρειν, ἀλλ' ὅσαι ὑγρότεραι καὶ ἰσχὺν ἔχουσαι εἰς τὴν

ἐπίσπασιν εὐλογον· ἐκ γὰρ τῆς ὑπολοίπου τροφῆς ἐβλάστησεν ἡ σύστασις· ἐφελκυσταμένη δὲ πλέον οὐκ ἄλογον τὸ μὴ πᾶσαν καταπέψαι τότε· τὸ τε μὴ ἐνδελεχῆς αὐτῶν τούτων διὰ τὸ μὴ ὁμοίας εἶναι τὰς διαθέσεις. Ἀσθενεστέρως γὰρ ἔχουσα καὶ χειρὸν θεραπευθεῖσα δηλον ὡς ἐλάττω λήψεται τὴν ὑγρότητα, μὴ λαβοῦσα δὲ πλήθος, οὐδ' ὑπόλειμμα ποιήσει· ἐπεὶ γεωργηθεῖσα ὁμοίως καὶ τῶν ἐκ τοῦ ἀέρος συνεργησάντων ἀποδώσει καὶ τὸ ὕστερον.

[11] Ἐνίστε δὲ κάκεινο συμβαίνει μὴ τυχούσης θεραπείας ὥστε τοὺς μὲν προδρόμους ἐνεγκεῖν, τὸν δὲ καρπὸν μὴ δύνασθαι. Τοῦτο δ' ὅτι τὸ μὲν ὑπῆρχε προκατειργασμένον, θάτερον δ' ὥσπερ ἐκ καινῆς ἔδει ποιεῖν· ἀλλὰ μὴν οὐδὲ τὸ μὴ ἐκπέττειν τοὺς ἐκ τῶν παχέων, ἀλλὰ τοὺς ἄνω μᾶλλον· ἡ γὰρ τροφή ἅμα καὶ ἡ θερμότης ἄνω φέρεται καὶ ὅλως ἡ τοῦ δένδρου ὁρμὴ πρὸς τὴν βλάστησιν· ὥσθ' ἅμα συναναφερομένου καὶ τοῦ θερμοῦ δι' ἀμφοτέρων ἡ ὑπόλειψις· δι' ὃ καὶ αἱ βλαστήσεις καὶ αἱ κατὰ μέρος ἀνθήσεις καὶ αἱ καρποτοκίαι τῶν αὐτῶν ὕστερον· ἀλλὰ περὶ μὲν τούτων ἱκανῶς εἰρήσθω.

[12] Παραπλήσιον δὲ καὶ τὸ συμβαῖνον καὶ ἐπὶ τῶν ἀμπέλων ἐστίν· καὶ γὰρ αὗται προβλαστάνουσιν ἐνίστε συνηθροισμένης τῆς γονίμου καὶ βλαστητικῆς ἀρχῆς· ὁ δὲ τόπος ὠρισμένος αὐταῖς, ἐκ τῶν ὀφθαλμῶν γὰρ ἡ βλάστησις· ὅποια δ' ἂν καὶ τὰ τοῦ ἀέρος ἐπιγένηται καὶ ἐπὶ πόσον χρόνον, οὕτω καὶ τὰ τῆς αὐξήσεως ἀκολουθεῖ. Σχεδὸν δὲ καὶ ὅσα πρωῒβλαστῇ καὶ πρωῒανθῇ φύσει ταῦτο τοῦτο πάσχει· κυῖσκόμενα γὰρ ἐν ὥρᾳ προκαλουμένων τῶν εὐδίων πολλάκις ἀποτίκτει πρὸ τῶν καιρῶν καὶ προάγει μέχρι οὗ ἂν ὁ ἀήρ ὁμαλίζῃ· τὰς μὲν οὖν παρώρους βλαστήσεις ἐν ταύταις ὑποληπτέον ταῖς αἰτίαις εἶναι.

[2.1] Τὰς δὲ μὴ ἐκ τῶν οἰκείων μερῶν, ἀλλ' οἷον ἀκρεμόνων καὶ στελέχους οὐ πόρρω ταύτης ὅταν ἀθροισμὸς εἰς ταῦτα γένηται τῆς γονίμου δυνάμεως· ἀρχῆς γὰρ ἐπισυστάσης ἡ ἐπιρροή τῆς τροφῆς ἐξομοιοῦται τῷ ὑποκειμένῳ καθάπερ ἐν τοῖς ἄλλοις. Ἡ δὲ σύστασις οὐκ ἄλογος εἰς τοιαύτην τινὰ κατὰ μόριον ἔλαβε κρᾶσιν, ἀλλ' εὐλογωτέρα πολὺ τῆς ἐν ζώοις γινομένης οἷον εἰ κέρας ἐκ τοῦ στήθους ἢ τι τοιοῦτον ἕτερον· αὕτη γὰρ μείζων ἡ παραλλαγή τῶν ἐν τοῖς φυτοῖς ὅσῳ μᾶλλον ὁμοιομερῇ τὰ φυτὰ τῶν ζώων· [2] ἐὰν δὲ διὰ καὶ προβλάστημά τι γένηται τῷ καρπῷ ἔλαττον ἔτι τὸ ἄτοπον· ἐνίστε γὰρ καὶ φύεται κλῆμα ἐκ τοῦ στελέχους ἰσχύσαντα δὲ καρποτοκῆσαι ταῦτ' οὐκ ἄλογον. Ἀλλ' ὅταν αὐτὸς ὁ καρπὸς ἐκ τοῦ ἀκρεμόνος ἢ τοῦ στελέχους ἀποπώτερον ὥσπερ ἐπὶ τῶν ῥοῶν· αἰτίαν δὲ τὴν εἰρημένην ὑποληπτέον. Αἱ δὲ τοιαῦται παραλλαγαὶ τῶν τόπων ἐλάττους εἰσὶν οἷον εἴ ποτε συκὴ τις ἤνεγκεν ἐκ τοῦ ὀπισθεν τοῦ θρίου τὸν καρπὸν· μικρὰ γὰρ ἡ μεταβολὴ καὶ ὁ τόπος

ὅλως οὐκ ἀλλότριος τοῦ συμβαίνοντος.

[3] Αἴτιον δὲ ὅτι τὴν μὲν ἐπιβλάστησιν ἀσθενῇ, τὴν δ' ἐνταῦθα συρροὴν ἰσχυροτέραν ἔσχεν ὥστ' ὀψιαιτέρας γενομένης τῶν προδρόμων ἐπένειμέ τε καὶ ἐξέπεπεν. Φαίνεται δὲ καὶ τῇδε ἦττον ἄτοπον ὅτι γένος τί φασιν εἶναι τοιοῦτον ὃ δὴ καλοῦσιν ὀπισθοκάρπιον· εἰ γὰρ ὅλως τι πέφυκεν οὕτω καρποτοκεῖν τῶν ὁμογενῶν οὐκ ἄτοπον συμβῆναι ποτε καὶ τοῖς μὴ πεφυκόσι τῆς ὁμοίας διαθέσεως γενομένης.

[4] Ἐπεὶ καὶ τὸ ἐκ τῶν ἀκρεμόνων ἐνεγκεῖν τινα ὁμοιότητα ἔχει τῇ ἐν Αἰγύπτῳ συκαμίνῳ· φέρει γὰρ δὴ κάκεινη τὸν καρπὸν ἐκ τοῦ στελέχους, οὐκ ἐκ τῶν ἀκρεμόνων εὐβλαστής τις οὔσα καὶ εὐτονος ὡς ἔοικε πρὸς καρποτοκίαν· σημαίνει δὲ τὸ πλεονάκεις ἀπὸ τῶν αὐτῶν φέρειν ἀφαιρουμένων. Οὐ πεπαίνει δὲ καλῶς μὴ ἐπικνισθέντων καὶ περιαιφθέντων ἐλαίῳ καθάπερ ἐλέχθη διὰ τὴν εὐτροφίαν καὶ τὸ πλῆθος τῆς ἐπιρροῆς· ἀφαίρεσίς τε γὰρ γίνεται τῇ ἐπικνίσει καὶ τὸ ἔλαιον ἅμα διαθερμαῖνον καὶ ὁ ἥλιος ἀνεωγμένων ταχεῖαν ποιεῖται τὴν πέψιν.

[5] Ἔοικε δὲ παραπλήσιον τρόπον τινὰ τὸ συμβαῖνον τοῖς κατὰ μέρος ἀνθοῦσιν ἀπὸ τῶν κάτωθεν ἀρχομένοις. Ἐκείνων τε γὰρ τὰ μὲν ἰσχύοντα καὶ οἷον τετελεωμένα καὶ ἀνθεῖ καὶ καρπογονεῖ, τὰ δ' ἀσθενέστερα καὶ ἐπάνω προσαύξεται καὶ βλαστάνει καὶ ἀεὶ τὸ τελοούμενον ἀνθεῖ, τὴν δὲ τῆς τροφῆς ἐπιρροὴν ἕκαστον εἰς τὴν ἑαυτοῦ φύσιν καταμερίζεται καὶ δύναμιν· καὶ τούτων ὁμοίως μὲν εἰς τὴν βλάστησιν φέρεται τι τῆς τροφῆς, ἡ δ' εἰς τὸ ἰσχυρὸν ἤδη καὶ καρπογονοῦν· ἐκεῖνο δ' οὐπω δύναται διὰ τὴν ὑγρότητα καὶ τὴν ἀτέλειαν· καὶ περὶ μὲν τούτων ἀρκεῖτω τὰ εἰρημένα.

[3.1] Τὰς δὲ μεταβολὰς τῶν καρπῶν εἴ τινες ἢ ἐκ λευκῶν μέλανες ἢ ἐκ γλυκέων ὀξεῖς ἢ ἀνάπαλιν καθάπερ φασὶν ἐπὶ τε συκῆς καὶ ἀμπέλου καὶ ρόας τοῦτο συμβαίνειν ἐνιαχοῦ μὲν οὐδὲν θαυμαστὸν οὐδ' ὅλως ἄτοπον φαίνεται τὸ τὴν φύσιν, ὅτε μὲν οὕτως, ὅτε δὲ ἐκείνως καὶ τοῖς μέρεσιν ἀνομοίως φέρειν οἷον τὴν κάπνεον ἄμπελον καλουμένην· αὕτη γὰρ δοκεῖ τοὺς μὲν λευκοὺς ἐνίστε, τοὺς δὲ μέλανας καὶ ὅτε μὲν πάντας τοιούτους, ὅτε δὲ τοιούτους φέρειν. Δι' ὃ καὶ οὐδ' οἱ μάντιες εἰώθασι τοῦτο κρίνειν ὡς τέρας· τὸ γὰρ εἰωθὸς οὐ τέρας.

[2] Αἴτιον δὲ τῆς παραλλαγῆς ὅτι τὸ χρῶμα τούτων τῶν βοτρύων οὔτε μέλαν οὔτε λευκὸν ἐστὶν ἀλλὰ καπνώδεις, ὅθεν καὶ τὴν προσηγορίαν ἔσχεν. Ἐὰν οὖν μικρά τις ἐναλλαγὴ γένηται δοκεῖ μεταβεβληκέναι τὴν χροάν· οὐδ' ἕτερον δ' εἰλικρινὲς οὔτε τὸ μέλαν οὔτε τὸ λευκὸν ἔχει δι' ὃ καὶ ἐνίστε τῶν

βοτρῶν ἑτερόχροοί τινες, οἱ μὲν εἰς τὸ λευκόν, οἱ δ' εἰς τὸ μέλαν μᾶλλον ἀποκλίνοντες. Αἰτία δ' ἡ τροφή καὶ ἡ διάθεσις αὐτῆς τῆς ἀμπέλου.

[3] Τοῦτο μὲν οὖν ὥσπερ ἐλέχθη συγχωρεῖται τῷ μὴ θαυμαστῷ. Τὸ δ' ἐπὶ τῶν ῥοῶν εἰ μὲν ὅλων τῶν δένδρων γίνονται μεταβολαὶ παρόμοιοι ἂν τι τὸ συμβαῖνον εἴη τοῖς περὶ Κιλικίαν καὶ Αἴγυπτον εἴπερ αὐτόματος ἡ μεταβολή. Τῆς γὰρ χώρας τὸ πάθος καὶ ἡ δύναμις. Εἰ δὲ μὴ ὅλων ἀλλὰ ποτε τοῦτο συνέβη τῇ τροφῇ καὶ τῇ διαθέσει τὴν αἰτίαν ἀποδοτέον ὥς ἐκ τοιαύτης γεγενημένη καὶ κραθείσῃ ἐν τῇ ἀνθήσει. Εἰ δ' ἀνωμάλους ἦνεγκεν ἐν ταῖς ῥίζαις ἡ αἰτία καὶ εἴ τι μέρος ἄλλο κύριον τῷ τὰ μὲν τοιαύτην, τὰ δὲ τοιαύτην λαβεῖν ἢ καὶ ποιῆσαι καὶ ἀναδοῦναι τὴν τροφήν· ἅμα δὲ καὶ τὸν ἀέρα συνεργεῖν τι, καὶ γὰρ ὑπὸ τούτων γίνονται διαφοραί.

[4] Δόξειε δ' ἂν ἀτοπώτατον ἐνταῦθα εἶναι τὸ μερίζεσθαι τὰς ῥίζας· ἐνίστε γὰρ ἐκ θατέρου μέρους οὐκ ἔχει τὸ δένδρον ἢ ἐλάττους, ὁ δὲ καρπὸς ὁμοίως πανταχόθεν ὥς ἀναμιγνυμένης δῆλον ὅτι πανταχοῦ τῆς τροφῆς. Οὐ μὴν ἄλλ' ἴσως ἐὰν μὲν ἐκλείπωσί τινες ἀπὸ τῶν ἐτέρων ἡ τροφή πᾶσιν. Ἐὰν δὲ πανταχόθεν ἔχῃ τῷ καθ' αὐτὴν ἐκάστην οὐ κατὰ λόγον ὥς ἂν τις φράσειεν εὐθυπορούντων πως τῶν πόρων· ἕνια γὰρ συμβαίνει καὶ ζῆν τῶν φυτῶν ἐκ θατέρου μέρους· αὐξανόμενα γὰρ συμπληροῦν πως τὸ ὅλον τὰ μὲν ἐμπεριλαμβάνοντα, τῶν δὲ καὶ ἀποπιπτόντων διὰ τὸ αὖθον· εἰ δέ τις καὶ αὕτη πίστις ἐστὶν ἐκ τῶν συντιθεμένων κλημάτων μὴ ὁμογενῶν ὅτι μία μὲν ἢ ἄμπελος, φέρει δ' ἐκάτερον τῶν μερῶν τὸν οἰκεῖον καρπὸν ὥς οὐ μιγνυμένης ἄλλ' εὐθυπορούσης τῆς τροφῆς εἴη δ' ἂν καὶ ταύτῃ χρῆσθαι· τοῦτο μέντοι ἥκιστα γινόμενον καὶ ἥκιστα πίστιν ἔχον ἐστίν· [5] αἱ δ' ἄλλαι μεταβολαὶ μάλιστα τὰς εἰρημένας ἂν ἔχοιεν αἰτίας ὁμοίως ἐπὶ πάντων εἴτε χρώμασιν εἴτε χυλοῖς εἴτε ἄλλῳ τινὶ μεταβάλλουσιν. Αἱ γὰρ τροφαὶ τὰς διαθέσεις ἀλλοιοῦσι καὶ μεθίστασιν ὅτε μὲν κρατούμεναι, ὅτε δὲ κρατοῦσαι καθάπερ καὶ ἐν τοῖς ἀπὸ τῶν σπερμάτων φυομένοις, πλὴν ἐνταῦθα ἢ ἔκστασις ἀεὶ πρὸς τὸ χειρόν, ἄλλ' ἐπὶ τῶν ἐξεργασμένων καὶ ἡμερωμένων ἔχει τὴν ὁμοίωσιν.

[6] Ἀπλῶς δ' ὥσπερ ἐλέχθη μικράν τινα χρήν νομίζειν ἐν τούτοις εἶναι τὴν μεταβολὴν ὅπου μὴ χώρα μεταβάλλει· τὰ δὲ τοιαῦτα χρόνῳ γίγνεται καὶ οὐκ ἐπέτεια καθάπερ οὐδὲ τὰ ἡμερούμενα καὶ ἀγριούμενα. Μέγα δ' οὖν πρὸς πίστιν τῆς μεταβολῆς τῆς παρὰ τὰς χώρας καὶ ὅτι θεραπεῖαί τινες τῶν ῥιζῶν καὶ τῆς τροφῆς ποιοῦσι μεταβολὰς, ἀλλὰ τὸ οὕτως ἐν βραχεὶ χρόνῳ καὶ ταχέως ἄπιστον εἰ μὴ τις ἄμφω ταῦτα συνθήσει καὶ τὸν χρόνον λανθάνειν καὶ τὴν μεταβολὴν εἶναι βραχεῖαν·

[7] ἐπεὶ ἐν γε τοῖς ἐπετείοις οὐκ ἄλογον οὐδ' ὁμοίως ἐφ' ὧν συμβαίνει θαυμαστὸν εἶπερ ἄρα συμβαίνει καθάπερ ὅταν ἐκ πυρῶν αἶρα γένηται διὰ τε τὸ πολλάκις γίνεσθαι καὶ διὰ τὸ τὴν αἰτίαν οἶεσθαί πως· αἱ γὰρ ὑπερομβρίαί ποιοῦσιν· εἰ δὲ καὶ ἐκ τῶν αἰρῶν εἰς πυροὺς πάλιν ἀποκαθίσταται, τοῦτο θαυμασιώτερον· εἴη δ' ἂν ὥσπερ ἀσθενεία τις ἢ νόσος γεγεννημένη τοῦ σπέρματος ἥτις ἀπολύεται μεθισταμένων ἄρα τῶν περὶ τὸν ἀέρα καὶ τὴν τροφήν. Ἀλλὰ γὰρ ταῦτα μὲν ἐπὶ πλέον εἴρηται συμπαραλαμβάνοντα πρὸς τὴν τῆς αἰτίας πίστιν τὰ ὁμολογούμενα.

[4.1] Τὸ δ' ἐνεγκεῖν ἄμπελόν ποτε καρπὸν ἄνευ φύλλων ὥς μὲν ὅλως εἰπεῖν οὐ πιθανόν, ὥς δὲ μικρᾶς τιнос γενομένης βλαστήσεως καὶ ταύτης διὰ τὴν ἀσθένειαν ἀπορρυσίσης μᾶλλον πιθανόν ὥς ἐνταῦθα πλείονος καὶ σφοδροτέρας τῆς ὀρμῆς γινομένης· ὅπερ ἐπὶ γέ τινων δένδρων ἀεὶ συμβαίνει σχεδὸν ὅταν εὐκαρπῆσωσιν ὥσπερ ἐπὶ τῆς ἀμυγδαλῆς· διὰ γὰρ τὸ πλῆθος οὐδὲ φαίνεται τὰ φύλλα καὶ ἄλλα μικρὰ καὶ ἀσθενῇ γίνεται τῆς φύσεως ἐνταῦθα ὠρμηκυίας. Ὡσπερ καὶ ἐν τῷ ἀνθεῖν ἢ ἄμπελος ὅταν ὀψίση [καί] διατηρεῖ τὸν καρπὸν ἄνευ τῶν οἰνάρων ὥσπερ καὶ ἡ συκὴ τῶν θρίων·

[2] ἰσχυρότεροι γὰρ ὅταν ἅπαξ συστῶσι γίνονται τῶν φύλλων, οἱ μὲν διὰ τὸν μίσχον καὶ τὴν προσάρτησιν, οἱ δὲ διὰ τὸ πιλοῦσθαι τῷ ψύχει. Τῶν μὲν γὰρ φύλλων ἐξαιρεῖται τὴν ὑγρότητα καὶ τὸν ὀπὸν, τῶν δὲ καρπῶν διὰ τὸ πλῆθος καὶ τὸ μᾶλλον ἔχειν θερμότητα τοῦτο μόνον δύναται συμπυκνῶσαι καὶ πιλῶσαι. Παραπλήσιον δὲ τούτῳ καὶ εἴ ποτέ τις ἐλάα τὰ μὲν φύλλα ἀπέβαλε, τὸν δὲ καρπὸν ἐξήνεγκεν. Ἀσθενέστερον γὰρ ὃν μᾶλλον ὑπήκουσε τοῦ ψύχους ἢ εἴ τι πάθος εἴη ἕτερον· πεπανθεὶς μὲν γὰρ ὁ καρπὸς αὐτόματος ἀπορρεῖ, πρὸ δὲ τοῦ πεπανθῆναι μᾶλλον ἰσχύει καὶ προσήρτηται. Δι' ὃ καὶ ἀρβδίζουσι τὰς ἐλάας.

[3] Ταῦτα μὲν οὖν καὶ ὅσα ἄλλα τοιαῦτα φυσικὰς τινας ἀρχὰς τὰ μὲν ἐξ αὐτῶν, τὰ δ' ἐκ τοῦ περιέχοντος ἔχει· ἐπεὶ καὶ τὰ αὐτόματα διαβλαστάνοντα ξύλα, καθάπερ τὰ ἐλάϊνα καὶ εἴ τι ἄλλο τοιοῦτον ἅπερ εἰς τέρατα καὶ σημεῖα ἀνάγουσιν οὐκ ἔστιν ἄλογον· φύσει τε γὰρ εὖζωα καὶ βλασθητικά διὰ πυκνότητα καὶ τὸ ἐγγυμον. Καὶ ὅταν ἐξωθεν ἱκμάδα τινὰ λάβῃ, ταχὺ ἀναδίδωσιν, ὥς δ' ἐπὶ τὸ πολὺ κατορυπτόμενα καὶ ἐν ὑγρῷ τόπῳ βλαστάνει πλὴν εἴ τι κοπὲν ὕστερον μικρῷ διεβλάστησεν ἔχον ἐν ἑαυτῷ συνηθροισμένην τὴν γόνιμον ὑγρότητα ἅμα δὲ καὶ τῆς ὥρας ὑπογυίου τῆς βλασθητικῆς οὕσης.

[4] Τούτῳ δὲ ὅμοιον τρόπον τινὰ τὸ ἐπὶ τῆς σκίλλης καὶ ἐπὶ τῶν ἄλλων τῶν ἔξω βλαστανόντων· ὡσαύτως δὲ καὶ τὰ ἐκ τῶν ξύλων ἐκφυόμενα καὶ μάλιστα

ἐκ τῶν ἐλατίνων ἃ καλοῦσιν οἱ μάντις εἰλειθυίας· ἀνειμένον γὰρ ὄντος καὶ μαλακοῦ τοῦ ἀέρος ἐκφύεται μάλιστα ὅποτε ἡ ἐνυπάρχουσα ὑγρότης συρρεῦσα καὶ ἡ ἔξωθεν προσπίπτουσα συνεπάγη καὶ ἐποίησεν οἶον σφαιροειδές. Ὅμοιος δὲ καὶ ὅσα ἰδiei τῶν ξύλων· καὶ γὰρ ταῦτα νοτίου καὶ ὑγροῦ τοῦ ἀέρος ὄντος τουτὶ πάσχει καὶ οὐ πάντα, ἀλλ' ἐν οἷς ἐστι λιπαρότης οἶον κέδρου, κυπαρίττου, ἐλάας, ἃ δὴ καὶ σημεῖα καὶ τέρατα νομίζουσιν.

[5] Ὅσα δὲ ἄλλα συμβαίνει καὶ προφέρεται τῶν τοιούτων οἶον ὥς ποτε φασιν ἐν πλατάνῳ φῦναι δάφνην ἢ ἀπλῶς περὶ τὰς ἐμβλαστήσεις τὰς ἐν ἀλλήλοις ἐκ λανθανούσης ἀρχῆς ὑποληπτέον γίνεσθαι καθάπερ ἐλέχθη· τὸ γὰρ αὐτοῦ τοῦ δένδρου τοιαύτην τινα γίνεσθαι σῆψιν ἢ ἀλλοιώσιν ἄλλως τε καὶ πολὺ διεστώσης οὐκ εὐλογον· οἱ δὲ τρόποι τοιοῦτοι· λέγω δὲ λανθανούσης εἰ ἐπιτέσοι σπέρμα καὶ ἔμβιον γένοιτο σῆψιν ἔχοντος γεώδη τινα τοῦ δένδρου· βλαστοίη γὰρ ἂν οὕτως ἕτερον ἐν ἐτέρῳ· ἀλλ' ἡ τοιαύτη βλάστησις ὁμοία τῇ τῶν ἰξιῶν· ἢ ὥς διὰ πλείονος ἐπὶ τῇ πλατάνῳ ἐκ τοῦ χαλκοῦ τρίποδος· μᾶλλον δ' ἀμφοτέραι τῇ ἐκ τῆς γῆς·

[6] οὐ γὰρ οἶόν τε φῦναι μὴ γεώδους τινὸς ἐνυπάρχοντος ὥσπερ οὐδ' ἐκ τῶν τοίχων τῶν λιθίνων ἐὰν μὴ τοιαύτη τις συρροὴ γένηται καὶ σῆψις ἐξ ἧς πέφυκε βλαστάνειν ἔτι δ' ὕστερον ἐπιρροὴν τινα λαμβάνη τῆς τροφῆς· οὕτω γὰρ αὐτῶν ἡ αὔξησις. Ἀλλὰ τὰ μὲν τοιαῦτα καὶ αὐτομάτως ἢ πάντα ἢ ἓνια γίνεται, τάχα δὲ καὶ σπερμάτων τινῶν καταρρυέντων ἅμα τῇ σῆψει καὶ συστάσει· δάφνη δὲ καὶ εἴ τι τοιοῦτον ἕτερον ἀπὸ τῶν καρπῶν· εἰ δ' ἄρα καὶ τοῦτο ἀπὸ σήψεως τινος οὐδὲν διαφέρει πρὸς τὴν αἰτίαν.

[7] Εἰ δέ ποτε δένδρον ἐκπεσὸν ὑπὸ χειμῶνος ἀνέστη πάλιν αὐτόματον ὥσπερ ἐν Φιλίπποις μὲν ἰτέα, ἐν δὲ Ἀντάνδρῳ πλάτανος καὶ τῆς μὲν οὐδὲν ἀφηρέθη πλὴν ὅσοι τῶν ἀκρεμόνων κατεκλάσθησαν ἐν τῇ πτώσει, τῆς πλατάνου δὲ ἀφηρέθη καὶ τι παρεπελεκήθη τήνδ' αἰτίαν ὑπελάμβανον ὅτι πεσοῦσα ἐπὶ θάτερον μέρος ἀνέσπασε πολλὴν γῆν, ἐπιγενομένου δὲ εἰς νύκτα τότε πνεύματος ἐναντίου καὶ μεγάλου κινήσαντος αὐτὸ διὰ τὸ ἐμπίπτειν τοῖς ἀκρεμόσι ῥοπὴν ἐποίησεν ἐγκείμενον τὸ μέρος καὶ κατασπάσαν ὠρθωσεν· οὕτω γὰρ συνέβη τῷ ἐν Φιλίπποις· τὸ δ' ἕτερον ἐκινήθη μὲν ὁμοίως καὶ τὴν ἀνάσπασιν εἶχε τῆς γῆς, διὰ δὲ τὴν περικοπὴν ἀνέστη ῥᾶον· ἀλλὰ γὰρ ταῦτα μὲν ἴσως ἔξω φυσικῆς αἰτίας ἐστίν· ὑπὲρ δὲ τῶν ἐν αὐτοῖς φυτοῖς ἐκ τῶν εἰρημένων πειρατέον μετιέναι καὶ θεωρεῖν.

[5.1] Ἐπόμενα δὲ πῶς ἐστὶ τούτοις εἰπεῖν ὅσα δὴ διὰ τέχνης καὶ παρασκευῆς γίνεται τῶν περιττῶν ὑπὲρ ὧν φανερωτέρας ἂν τις ὑπολάβοι τὰς αἰτίας εἶναι

καθάπερ καὶ εἰσίν. Ἀγιάρτους μὲν γὰρ ποιοῦσι τοὺς βότρυν ἐξαιρουντες τὴν μήτραν, ἀφ' ἧς γίνεται τὸ γίγαρτον. Ἐκ τοῦ αὐτοῦ δὲ κλήματος φέρειν λευκὸν καὶ μέλανα βότρυν ἢ ἐν αὐτῷ τῷ βότρυϊ τὰς ῥάγας τὰς μὲν τοιαύτας, τὰς δὲ τοιαύτας, ὅταν διελόντες συνθῶσιν ἑκατέρου τὸ ἥμισυ πλὴν τοῦ κάτω μέρους καὶ συνδήσαντες καταπήξωσι· συμφύεται γὰρ ἀλλήλοις· [2] σύμφυτον μὲν γὰρ ἅπαν τὸ ζῶν τῷ ζῶντι καὶ μάλιστα τὸ ὁμογενὲς, ὅταν ἀφελκωθῇ καὶ γένηται μία τις φύσις. Ἐκάτερον δὲ καθ' ἑαυτὸ τὴν τροφήν διίησιν ὥστε μὴ ἐπιμιγνυμένης ἀποδιδόναι τὸν οἰκεῖον καρπὸν· ὅπερ καὶ οἱ ποταμοὶ ποιοῦσιν οἱ συμβάλλοντες ἀλλήλοις ὥσπερ ὁ τε Κηφισὸς ἐν τῇ Βοιωτίᾳ καὶ ὁ Μέλας· ἑκάτερος γὰρ ῥεῖ τὸν αὐτοῦ πόρον. Ἐνταῦθα δ' οὐδὲ συμβάλλουσιν, ἀλλὰ παρ' ἀλλήλας ὀχετεύονται καὶ ῥέουσιν αἱ τροφαί.

[3] Ταυτὸ δὲ καὶ παραπλήσιον τούτῳ καὶ ὅταν τὸ αὐτὸ δένδρον παντοδαπὰς φέρῃ ρόας ἢ μήλα· τῇ σφυρᾷ γὰρ οἷον μαλάξαντες τὰς ράβδους ἵνα συμφύωσιν (ἢ) διὰ τὴν ἀφέλκωσιν συνδήσαντες ἐφύτευσαν, εἴτα γίνεται τὸ μὲν δένδρον ἐν τῇ συμφύσει, διατηρεῖ δὲ ἕκαστον τὸ γένος ἔλκον καθ' αὐτὸ καὶ πέττον τὴν τροφήν, οὐδὲν δὲ ἄλλο ἢ τῆς συμφύσεως κοινωνοῦν. Σχεδὸν δὲ καὶ παρόμοιον τούτῳ καὶ ἐπὶ τῶν μειζόνων γίνεται καὶ μάλιστα ἐπὶ τῶν ἀγρίων τῇ φύσει· περιπλακεῖσα γὰρ συκῇ καὶ εἴ τι ἄλλο τοιοῦτόν ἐστι συμφύεται τε καὶ ἐν ποιεῖ τὸ στέλεχος·

[4] καὶ τούτων τὰ μὲν ἐξεπίτηδες ποιοῦσιν, ἔνια δὲ καὶ αὐτομάτως λαμβάνει τοιαύτην σύμφυσιν, ὅσα προσφιλεῖ τε καὶ μὴ ἐναντία ἀλλήλοις· ὅταν γὰρ ἅπαξ συμπλακῇ καὶ δέξηται, καθάπερ φύσις τις αὕτη μία γίνεται, δι' ὃ καὶ ἀφαιρῇ καὶ λύῃ τις αὐαίνονται, καθάπερ καὶ τῶν μὴ ὁμογενῶν τὰ ὁμοβλαστῇ καὶ σύντροφα γενόμενα ἀλλήλοις ὥσπερ ἐπὶ τῆς ἀναδενδράδος ἐλέχθη καὶ τῆς συκῆς. Ἐπεὶ ὅσα γε βλάπτει περιφυόμενα καὶ ἐμφυόμενα, καθάπερ ὁ κιττὸς, ἐκ τούτων γε οὐ γίνεται μία φύσις· αὐαίνεται γὰρ θάτερον. Πολυφορεῖν μὲν οὖν ταυτὸ διὰ ταύτας ὑποληπτέον τὰς αἰτίας· ὅμοιον γὰρ τρόπον τινὰ καὶ ὥσπερ εἴ τις ἐνοφθαλμίσειε δένδρον ἐν ἀπὸ πλειόνων καὶ διαφορῶν· ἀρχὰς γὰρ πεποίηκε καὶ φύσεις πλείους ἀπὸ μιᾶς οὐσίας, ἐκεῖνο δὲ ἐξ ἀρχῶν πλειόνων μίαν οὐσίαν τῇ φύσει.

[6.1] Τὰ δὲ τῶν καρπῶν μεγέθη τῶν κατορυττομένων ἐν ταῖς χύτραις ὅταν καταθῶσι τοὺς ἀκρεμόνας, οἷον ῥοῶν καὶ μήλων εὐλόγως γίνεται. Τό τε γὰρ ὑπὸ τοῦ ἡλίου καὶ τοῦ ἀέρος ἀφαιρούμενον ἢ χύτρα κωλύει ἀποστέγουσα καὶ ἅμα τὴν ἐκ τῆς γῆς ἔλκει νοτίδα δι' ἧς τρέφεται· τὴν γὰρ ἀπὸ τοῦ δένδρου ἐπιρροὴν οὐκ εὐλογον γίνεσθαι πάρωρον οὔσαν ἢ βραχεϊὰν τινα πάμπαν, δι' ὃ

καὶ ὁ μὲν κόκκος οὐδὲν μείζων τῆς ρόας γίνεται, τὸ δὲ σίδιον παχύτερον ὥς οὐ διικνουμένης εἰς ἐκεῖνον τῆς τροφῆς· ἔοικε γὰρ ὁ οἰκεῖος χυλὸς τῇ φυσικῇ δυνάμει πάντων γίνεσθαι καὶ πεπαίνεσθαι, δι' ὃ καὶ τὰ μῆλα χεῖρω καὶ ἀχυλότερα γίνεται· τὸ δὲ σίδιον καὶ ἐκ τῶν ἔξωθεν λαμβάνει τὴν αὐξησιν ὥς ἀλλοτριώτερον τῆς φύσεως.

[2] Ἡ δ' ὀλκὴ τῆς νοτίδος, ἐξ ἧς ἡ τροφή καὶ ἐπίδοσις οὐκ ἄλογος ὥσπερ τοῦ ἄρου καὶ ἐτέρων ὥσπερ πρότερον εἵπομεν. Ὁμοίως δὲ τοῦτο συμβαίνει καὶ ἐν τοῖς λαχάνοις, ἐφ' ὧν παχύνουσι τὰς ρίζας τῶν μὲν ἀφαιροῦντες τὰ φύλλα, καθάπερ τῆς ραφανίδος, ὅταν μάλιστα ἀκμάζωσι τοῦ χειμῶνος, καὶ κατασάττοντες τὴν γῆν ὥστε καὶ τὸ ὕδωρ ἀποστέγειν· ἐν γὰρ τῷ θέρει γίνονται θαυμασταὶ τῷ πάχει.

[3] Τοῦ δὲ σελίνου περιορύζαντες κάτω μέχρι τῶν ριζῶν καυχρύδιον περιβάλλοντες καὶ ἄνωθεν τὴν γῆν. Αἴτιον δὲ ὅτι τὴν τροφήν ἅπασαν αὐταὶ λαμβάνουσιν καὶ οὐ διδόασιν εἰς τοὺς βλαστούς· μὴ μεριζομένης δὲ πλείων ἢ αὐξησις. Ὅσα μὲν οὖν παραβλαστικά οἶον κρόμυα ρίζας ἐτέρας ἀφίησι καὶ ἄλλα δὲ τῶν ἀγρίων· ἡ δὲ ραφανὶς μὴ οὕσα παραβλαστική, τροφήν δὲ λαμβάνουσα καὶ οὐ διαπέμπουσα εἰς τὸ ἄνω παχύνεται καὶ μείζων γίνεται. Τοῦ δὲ μὴ συμβαίνειν φθορὰν καὶ σῆψιν ἢ ἐπίσαξις αἰτία τῆς γῆς ἀποστέγουσα τὸ ὕδωρ καὶ ὅλως πᾶν τὸ ἀλλότριον· τοῖς δὲ σελίνοις τὸ καυχρύδιον θερμὸν καὶ χαννὸν ὃν συνανέλκει μὲν τῇ χαννότητι τὴν τροφήν, κατέχει δὲ καὶ οὐ διαδίδωσιν εἰς τὸ ἄνω καὶ ἅμα τῇ θερμότητι πέττει πολλῆς οὖν τροφῆς γινομένης καὶ πεττομένης πολλὴ καὶ αὐξησις.

[4] Παραπλήσια δὲ τούτοις καὶ τὰ περὶ τοὺς σικύους καὶ τὰς κολοκύντας γινόμενα κατὰ τε τὴν ἀπαλότητα καὶ τὴν αὐξησιν οἷον ἐάν τις μικρὰς οὐσας κρύψη κατὰ τῆς γῆς· οὐδὲν γὰρ ἀφαιρεῖται τῆς τροφῆς, ὁ δ' ἥλιος καὶ τὰ πνεύματα ἀναξηραίνοντα τοὺς ὄγκους ἐλάττους ποιοῦσιν ὥσπερ καὶ τῶν δένδρων τῶν ἐν τοῖς προσηγέμοις καὶ εὐεῖλοις. Ὡσαύτως δὲ καὶ οἱ ἐν τοῖς ἀγγείοις τιθέμενοι καθάπερ ἐν νάρθηκι καὶ καλυπτῆρσιν. Ἡ μὲν γὰρ τροφή πλείων διὰ τὸ μήτ' ἀποπνεῖσθαι μήτ' ἀποξηραίνεσθαι μηδὲν, ἡ δ' αὐξησις εἰς μῆκος καὶ διὰ τὸ εὐροεῖν τὴν τροφήν εὐθυποροῦσαν καὶ διὰ τὸ μηδὲν ἀντισπᾶν μηδ' ἀντιτίπτειν.

[5] Ὁμοία δ' αἰτία καὶ τοῦ διαμένειν χλωροὺς ἐάν τις φυτεύσας περὶ φρέαρ ὅταν ὥσιν ὠραῖοι καθεὶς ἀποστεγάσῃ· ἡ μὲν γὰρ ἀπὸ τοῦ ἡλίου καὶ τοῦ πνεύματος οὐ γίνεται ξηρότης, ἅμα δὲ καὶ ἡ ἀπὸ τοῦ ὕδατος ἀτμὶς οἷον θάλλοντάς τε παρέχει καὶ κωλύει ξηραίνεσθαι. Τροφήν δὲ λαμβάνοντες

διαμένουσι σωζομένων τῶν ῥιζῶν· ἔμβιοι δὲ γίνονται καὶ θεραπευόμενοι πλείω χρόνον δι' ὃ καὶ ἂν τις περιτεμὼν τὴν βλάστησιν ὅταν καρποτοκῇσῃ περισάξῃ γίνονται πάλιν ἐκ τῶν ῥιζῶν σίκυοι καὶ πρωῖτεροι πολὺ τῶν σπειρομένων ὅτι προὑπάρχει τὸ τῶν ῥιζῶν.

[6] Ἔτι δὲ ἡ περίσαξις ἀλέαν παρέχουσα θάπτει ἀνιέναι ποιεῖ βλαστὸν· μέγα γὰρ καὶ ἡ ἀλέα πρὸς τὸ πρωῖβλαστεῖν. Σημεῖον δὲ καὶ τοῦτο φανερόν· ἐὰν γὰρ τις χειμῶνος ἐν ταλάροις φυτεύσῃ σικύου σπέρματα καὶ ἄρρη τε θερμῷ καὶ πρὸς τὸν ἥλιον ἐκφέρῃ καὶ πρὸς τὸ πῦρ τιθῇ καὶ ὅταν ἡ ὥρα τοῦ σπεῖρειν καθήκῃ σὺν αὐτοῖς ταλάροις φυτεύσῃ πρώϊοι σφόδρα γίνονται· ταῦτα μὲν οὖν διὰ τὰς εἰρημένας αἰτίας συμβαίνει.

[7] Τῷ δὲ σχήματι καὶ τῇ μορφῇ μεταβάλλει τὸ σέλιον ἐὰν σπαρὲν καταπατηθῇ καὶ ἐπικυλινδρωθῇ· γίνεται γὰρ οὕλον διὰ τὸ μὴ διῦναι τὴν βλάστησιν, ἀλλὰ ... ἐξομοιοῦται γὰρ ἐν ᾧ ἂν τεθῇ ἀγγεῖω· τοῦτο δ' ὅτι ἡ τροφή κωλυομένη καὶ ἀποστεγομένη τῷ πέριξ φέρεται πρὸς τὸ ἐφελκόμενον καὶ εὐοδοῦν, οἷον γὰρ ὀχετεία τίς ἐστιν, ὥστε λαμβάνειν τὴν ὁμοιότητα τῷ περιέχοντι. Συμβαίνει δὲ τρόπον τινὰ καὶ ἐπὶ τῶν ζώων τοῦτο κατὰ μικρότητα καὶ μέγεθος καὶ βραχύτητα καὶ μήκος· μεμορφωμένα γὰρ εὐθύς ἐκεῖνα ταῦτα δ' ἅμα τῇ γενέσει μορφοῦνται· δι' ὃ καὶ τὸ σέλιον ὅταν μεταφυτεῖται κελεύουσιν ὁπόσον ἂν τις βούληται ποιῆσαι τηλικούτον πάτταλον κατακρούειν ὥστ' ἐκπληροῦν πάντα τὸν τόπον τὴν ῥίζαν.

[8] Ὅμοιον δὲ τρόπον τινὰ τούτῳ καὶ ἡ τῶν ῥιζῶν αὐξησις ἐν τοῖς ἡμερώμασιν· εὐοδοῦσαι γὰρ καὶ ἔχουσαι τροφήν αὐξοῦνται μᾶλλον καὶ εἰς μήκος καὶ εἰς πᾶχος.

[9] Ποιεῖ δὲ μεγάλας καὶ τὰς ῥίζας καὶ τὰς βλάστας καὶ ἐὰν πλείω τις εἰς ταῦτ' ὀσπέρματα ξυνδήσας εἰς ὀθόνιον φυτεύσῃ, δι' ὃ καὶ ἐπὶ τινῶν τοῦτο ποιοῦσι, καθάπερ ἐπὶ τοῦ πράσου καὶ σελίνου καὶ ἐτέρων· ἰσχύει γὰρ τὰ πλείω δῆλον ὅτι μᾶλλον καὶ ἐξ ἀπάντων γίνεται μία τις φύσις. Ἐνια δὲ κατὰ τὴν σπορᾶς ὥραν λαμβάνει μορφήν ἀλλοίαν, οἷον ἡ γογγυλὶς ἂν εὐθύς τις ἐπὶ τῆς ἄλλῳ φυτεύσῃ πλατεῖα γίνεται· οὕτω δ' ἦττον ῥιζοῦται καὶ διευρύνεται μᾶλλον.

[10] Ὅσα δ' ἐν σχίνῳ φυτεύουσιν ἢ σκίλλῃ πάντα τῆς εὐβλαστίας ἔνεκα καὶ εὐτροφίας φυτεύουσιν· ἔχει γὰρ τινα ἄμφω θερμότητα καὶ ὑγρότητα καὶ γίνεται καθάπερ ἐμφυτεία τις. Ὅμοίως δὲ καὶ εἴ τι ἕτερον ἐν ἑτέρῳ καθάπερ τὸ πῆγανον ἐν συκῇ, δοκεῖ γὰρ δὴ κάλλιστον γίνεσθαι. Φυτεύεται δὲ παρὰ τὸν φλοιὸν παραπηγνύμενον καὶ τῇ γῇ κατακρύπτεται· καὶ συμβαίνει δὲ τὸν ὀπὸν

ἅμα τῇ τροφῇ διὰ θερμότητος καὶ βοήθειάν τινα ἔχειν εὐκαιρον ὥσπερ καὶ τὴν τέφραν παραπαττομένην εἴτ' οὖν πρὸς τὸ μὴ σκωληκοῦσθαι τὰς ρίζας εἴτε καὶ πρὸς τὸ τρέφεσθαι ἄλμῃ· ἔχει γάρ τινα ὁμοίαν θερμότητα.

[11] Μέγεθος δὲ γίνεται φακῶν καὶ ἐρεβίνθων τῶν μὲν ἂν ἐν βολίτῳ φυτεύηται τὸ σπέρμα· συντρέχει γὰρ τῇ θερμότητι καὶ ξηρότητι· τῶν δ' ἐρεβίνθων ἐὰν μετὰ τῶν κελύφων βρεχθέντες· ἔλαττον γὰρ τὸ ἀποσηπόμενον καὶ ἡ τροφή πλείων ἢ πρώτη· πρώϊοι δὲ ἂν ἅμα τοῖς ἄλλοις σπαρῶσι· καὶ ταῦτα μὲν δὴ τι θαυμαστὸν ἔχει καὶ ἔνια δοκεῖ καὶ παρὰ φύσιν.

[12] Αἱ δὲ τοιαῦται μεταβολαὶ καὶ αὐτόματοι γίνονται καὶ τέχνη καὶ κατὰ φύσιν· οἷον ἐπὶ τίφης καὶ ζειᾶς περιπλαττομένοις πυροῖς, ὥσπερ καὶ ὅσα τῶν σπερμάτων ἢ ἐν λίτρῳ προβρεχόμενα τεραμονέστερα ἢ ἐν μέλιτι καὶ γάλακτι γλυκύτερα γίνεται· πέφυκε γὰρ οἷον ἂν σπαρῇ τοιοῦτον καὶ γεννᾷ· σπείρεται δὲ διηλλοιωμένον καὶ μεταβεβηκός· ἐν ἀμφοῖν δὲ πως ἢ ἐν ἅπασι συμβαίνει μετακινεῖσθαι τὴν ἀρχὴν, ἔνθα μὲν κατὰ τὸ ποιὸν, ἔνθα δὲ καθάπερ ταῖς τίφαις καὶ ζειᾶς καὶ τῷ μορίον τι μὴ ἔχειν ὅπερ ἐξ ἀρχῆς μὲν περιαιρεθὲν οὐκ ἀδυνατεῖ γεννᾷ· πλεονάκις δὲ τοῦτο παθοῦσα καὶ ὥσπερ τελέως γυμνωθεῖσα καὶ παθητικωτέρα γινομένη τῷ τε ποιῷ μεταβάλλει καὶ τὸ πλῆθος οὐκ ἴσχει τοῦ ἀχύρου·

[13] συμβαίνει δὲ καὶ ἐν ἄλλοις μορίων τινῶν ἀφαιρουμένων ποιεῖν τινα διαφορὰν ὥσπερ ταῖς ἀμπέλοις ὅταν ἡ μήτρα τοῦ κλήματος ξυσθῇ τοῦς βότρυς ἀγιγάρτους εἶναι· καὶ πίστιν ταῦτα παράσχοιτ' ἂν ἴσως τοῖς ἀφ' ἐκάστου τῶν μερῶν λέγουσιν ἀπιέναι σπέρμα· λύσις δ' ἤπερ εἴρηται καὶ ἐπὶ τῶν ζώων.

[7.1] Αἱ μὲν οὖν τούτων μεταβολαὶ διὰ τὰς εἰρημένας αἰτίας· Ἡ δὲ τοῦ σισυμβρίου εἰς μίνθαν ὥσπερ ἐναντία δι' ἀργίαν γινομένη· συμβαίνει γὰρ ὅταν μὴ τις ἐξεργάζεται μηδ' ἀποδιδῶ τὴν οἰκείαν θεραπείαν ριζοῦσθαι μᾶλλον εἰς τὸ κάτω, ριζούμενον δὲ καὶ τὴν δύναμιν ἐκεῖσε τρέπον πᾶσαν ἀσθενέστερον ἄνωθεν γίνεσθαι καὶ τὴν δριμύτητα ἀποβάλλειν τῆς ὁσμῆς ὥστε ἐξ ἀμφοτέρων ἢ ὁμοιότης τῆς τε βλάστης καὶ τῆς ὁσμῆς· τῆς γὰρ δριμύτητος ἀφαιρουμένης ἢ κατάλοιπος ὁσμὴ μαλακὴ τις οὖσα καὶ ἀνειμένη προσεμφερῆς τῇ μίνθῃ γίνεται, δι' ὃ μεταφυτεύειν κελεύουσι πολλάκις ὅπως τοῦτο μὴ συμβαίνει· καὶ τοῦ μὲν σισυμβρίου τοιαύτην τὴν αἰτίαν ὑποληπτέον.

[2] Τὸ δ' ὠκιμον τὸ ἐν ἡλίῳ πολλάκις κείμενον ἀφερπυλλοῦται διὰ τὸ καταξηραίνεσθαι μᾶλλον· καὶ γὰρ τὸ φύλλον ἔλαττον γίνεται καὶ ἡ ὁσμὴ δριμυτέρα τῶν ξηρῶν· ἐλάττων γὰρ καὶ ἡ τροφή· δεῖ δὲ τὰς μεταβολὰς

τοιαύτας ὑπολαμβάνειν ὡς ἂν ὁμοιότητά τινα ἐχούσας οὐχ ὡς τελέας (ὥσπερ καὶ ἡ ἐξαιγειρουμένη λεύκη). Ἡ δὲ λεύκη πλατυφυλλότερόν τε τῆς αἰγείρου καὶ λειοφλοιότερον καὶ τὸ ὅλον εὐτροφώτερον· ἀπογηράσκουσιν δὲ καὶ ἐλάττονι τροφῇ χρωμένην οὐκ ἄλογον καὶ τὸ φύλλον στενότερον καὶ τὸν φλοιὸν τραχύτερον ἔχειν καὶ εἴ τι ἄλλο συνακολουθεῖ τοῖς μὴ ὁμοίως εὐτρόφοις.

[3] Τὸ δ' ὅλον οὐκ ἄγαν ἴσως τὸ συμβαῖνον θαυμαστὸν τῷ τε εἰς τὸ σύνεγγυς καὶ τὸ ὁμοιὸν πως μεταβάλλειν καὶ ἔτι τῷ ὄρῳ καὶ ἐπὶ γε τῶν ζώων γινομένας τοιαύτας τινὰς μεταβολὰς τὰς μὲν κατὰ τὴν γέννησιν οἷον ἐπ' ἄλλων καὶ ἐπὶ τῶν καλουμένων ψυχῶν· ἐκ κάμπης γὰρ χρυσαλλίς, εἴτα ἐκ ταύτης ἡ ψυχὴ· τοῦτο δὲ πλὴν τῶν ψυχῶν ἐπ' οὐδενὸς συμβαίνει. Τῶν δὲ καὶ τετελειωμένων ἤδη κατὰ τὰ πάθη καὶ τὰς διαθέσεις τοῦ σώματος, αἱ γίνονται διὰ τὰς ἐπετείους ὥρας ὥσπερ ταῖς ὀρνισιν· ἐπὶ τούτων γὰρ μάλιστα καὶ λέγεται καὶ ἔνδηλος τῶν χρωμάτων μεταβολὴ καὶ τῶν ὅλων σωμάτων ὥστε δοκεῖν ἐτέρους εἶναι. Ταῦτα μὲν οὖν ὥσπερ εἴρηται φυσικῶς ὑποληπτέον· τὰ δ' ἐξ ἀρχῆς λελεγμένα μᾶλλον κατὰ φύσιν.

[8.1] Ἀκόλουθα δέ πως τοῖς εἰρημένοις καὶ ὥσπερ ἐσχάτης θεωρίας περὶ νοσημάτων καὶ φθορᾶς εἰπεῖν ἀμφοτέρων μετέχοντα καὶ τῶν κατὰ φύσιν καὶ τῶν παρὰ φύσιν. Φθοραὶ μὲν γὰρ εὐθύς αἱ μὲν οὕτως, αἱ δ' ἐκείνως λέγονται, νόσοι δὲ τῇ μὲν ὅλως δόξαιεν ἂν εἶναι παρὰ φύσιν, ἐκβασίς γάρ τις αἰεὶ καὶ σύγχυσις τοῦ κατὰ φύσιν ἢ νόσος, τῷ δ' εἰσθῆναι καὶ πολλάκις συμβαίνειν κατὰ φύσιν λέγομεν ὁμοίως ἔν τε ζώοις καὶ φυτοῖς, αὐτὰ ταῦτα διαιροῦντες τὰ βίαια πάθη καὶ φανερώς ἀπὸ τῶν ἔξωθεν αἰτιῶν, οἷον τραυμάτων καὶ πληγῶν· τὰ γὰρ ὑπὸ ψύχους ἢ καύματος ἢ τινος ἐτέρου συμβαίνοντα τῶν ἐν τῷ ἀέρι παθημάτων οὐ λέγομεν παρὰ φύσιν· καίτοι βίαιά γέ πως καὶ ταῦτα καὶ ἀπὸ τῶν ἔξωθεν ἐστίν· ἀλλὰ γὰρ τοῦτο μὲν οὐτ' ἰδιὸν ἐστὶν ἐπὶ τῶν φυτῶν ἀλλὰ καὶ ἐπὶ τῶν ζώων οὔτε διάφορον πρὸς ὃ νῦν ζητοῦμεν·

[2] τῶν δὲ νόσων ἀρχαὶ καθάπερ τοῖς ζώοις ἢ ἀπ' αὐτῶν ἢ ἀπὸ τῶν ἔξωθεν καὶ ἡ φθορὰ ἢ ὅλως ἢ εἰς καρπογονίαν. Ἀπ' αὐτῶν μὲν ὅταν ἡ πληθὸς ἢ ἔνδεια τῆς τροφῆς ἢ ποιότητος, ἀπὸ δὲ τῶν ἔξωθεν ὅταν ἡ χειμῶνες ὑπερβάλλοντες ἢ καύματα ἢ ἐπομβρίαι ἢ ἄλλη τις δυσκρασία τοῦ ἀέρος· ἔτι δὲ ὅσα διὰ πληγῆν ἢ ἔλκωσιν ἐκ σκαπάνης ἢ ἐκτομῆς ἢ διακαθάρσεως ἢ ἐξ ἄλλης τοιαύτης αἰτίας· ὧν γ' ἐνὶ καὶ ἀπὸ τοῦ δαίμονος συμβαίνουσι καθάπερ ἡ χαλαζοκοπία· εἰ δὲ καὶ ἡ ἔνδεια καὶ ἡ ὑπερβολὴ τῆς τροφῆς τῶν ἔξωθεν ὡς τινὲς φασὶν οὐδὲν ἂν διαφέρει.

[3] Πάντα δὲ ἰσχύει μᾶλλον τὰ ἀπὸ τοῦ ἀέρος ἐν τοῖς ἀσθενῶς διακειμένοις· τὰς γὰρ ὑπερβολὰς ἦττον δύνανται φέρειν. Ἀσθενεστάτη δὲ διάθεσις μελλόντων τε καὶ ἀρχομένων βλαστάνειν καὶ πάλιν μετὰ τὴν καρποτοκίαν ὥσπερ ἐξηραμμένων· τότε γὰρ ἐν μεγίστη μεταβολῇ· δι' ὃ καὶ τὰ ἄγρια μάλιστα πονεῖ πρὸ τῆς βλαστήσεως ἢ ὑπ' αὐτὴν τὴν βλάστησιν ὅταν χαλαζοκοπηθῇ ἢ πνεύματα ἐπιγένηται ψυχρὰ σφόδρα ἢ θερμά. Κρατεῖται γὰρ ταῖς ὑπερβολαῖς. Οἱ δ' ὥραῖοι χειμῶνες ὠφελοῦσι καὶ τὰ ἄγρια καὶ τὰ ἡμερα· καὶ γὰρ ἰσχὺν ἐμποιοῦσι καὶ τῇ πιλήσει καὶ πυκνώσει καὶ εὐβλαστίαν.

[9.1] Ταῦτα μὲν οὖν ἀμφοῖν κοινά. Νοσήματα δὲ τῶν ἀγρίων οὐ λέγεται, τῶν δ' ἡμέρων λέγεται πλείω, τάχα δὲ καὶ ἔστι διὰ τὴν ἀσθένειαν ὧν τὰ μὲν ἀνώνυμα, τὰ δὲ ὀνομασμένα, καθάπερ ἡ ψώρα καὶ ὁ σφακελισμὸς καὶ ἀστροβλήτα καὶ σκωληκόβροτα γίνεσθαι. Ἀστροβλήτα μὲν οὖν μάλιστα γίνεται τὰ φυτὰ καὶ οἱ μόσχοι διὰ τὴν ἀσθένειαν. Συμβαίνει δὲ τὸ πάθος ὅταν ἡ γῆ ξηρανθῇ καὶ μὴ ἔχωσιν ἔλκειν ὑγρότητα, δι' ὃ καὶ ὑπὸ τὸ ἄστρον πλεῖστα·

[2] τὰ δὲ πρεσβύτερα διὰ τὴν ἰσχὺν ἀντέχει τε μᾶλλον καὶ ἔλκει πόρρωθεν, ἔτι δ' ὑγρότης ἢ οἰκεία πιότερα καὶ λιπαρώτερα καὶ πρωϊκαρπότερα τῶν νέων καὶ ὅσα ἂν προδείξωσιν πάντ' ἐκφέρουσιν· ὅλως δὲ πᾶσαν μεταβολὴν ἦττον δύναται τὰ ἀσθενέστερα φέρειν, ὑπὸ δὲ τὸ ἄστρον καὶ διυγραίνεται πῶς μᾶλλον τὰ δένδρα, καθάπερ πρότερον ἐλέχθη, δι' ὃ καὶ ἡ ἐπιβλάστησις· ἡ μὲν οὖν ἀστροβολία διὰ ταῦτα συμβαίνει καὶ ἔτι διὰ τὰς πληγὰς τὰς ἔξωθεν καὶ τὰς ἐλκώσεις· ἀσθενέστερα γὰρ διὰ ταῦτα γίνεται καὶ ἐπὶ πλεόν αὐτῶν αἱ δυνάμεις διίκνουσιν·

[3] σκωληκοῦται δὲ μᾶλλον τὰ πρεσβύτερα. Συμβαίνει δὲ δοκεῖ καὶ τοῦτο τὸ πάθος ἢ διὰ τὰς ἐλκώσεις τῶν περισκαπτομένων ἢ ὅταν ἐκδιψήσῃ διὰ τοὺς αὐχμούς· ἐκ μὲν γὰρ τῆς πληγῆς σήπεται, ἀλλοιούμενα δὲ τῇ σήψει ζωογονεῖ καθάπερ καὶ τὰ ἄλλα· ἐκ δὲ τοῦ διψῆσαι διὰ τὸ ἔλαττον ἔχειν τοῦ συμμέτρου τὸ ὑγρόν· οἷον γὰρ ἔκστασις γίνεται τις ἐκ φύσεως, ἐν δὲ τῇ ἐκστάσει μεταβολὴ καὶ ἀλλοίωσις, ἐν δὲ τῇ μεταβολῇ διὰ τὴν σῆψιν ἢ ζωογονία. Συμβαίνει δὲ τοῦτο καὶ ἐν ταῖς ἀφαναινομέναις· ἐνισχύει γὰρ τότε τὸ θερμόν. Σκωληκοῦνται δὲ μάλισθ' αἱ μηλέαι δι' ὃ καὶ τοῖς ἐμπύροις φαῦλαι· ταχὺ γὰρ αἱ ῥίζαι ξηραίνονται.

[4] Κοινότατα δὲ φαίνεται τῶν νοσημάτων εἶναι τοῦτό τε καὶ ἡ ἀστροβολησία. Πάντα γὰρ ὡς εἰπεῖν σκώληκα ἴσχει πλὴν τὰ μὲν πλείους καὶ θάττον ἀπόλλυται, καθάπερ μηλέα, συκῇ, ἄπιος, τὰ δ' ἐλάττους καὶ

βραδύτερον. Ἦκιστα δὲ σκωληκοῦται τὰ δριμέα οὐχ ὅτι ἄσηπτα μόνον, ἀλλ' ὅτι καὶ ἡ δριμύτης κωλύει ζωογονεῖν· σημεῖον δὲ τὸ τῆς δάφνης· αὕτη μὲν γὰρ σήπεται ταχέως, σκωληκοῦται δ' οὐχ ὁμοίως· ἐπεὶ διὰ τοῦτο οὐδ' ἐρίνεος ὁμοίως τῇ συκῇ· δριμύτερος γὰρ ὁ ὁπός.

[5] Ὅλως γὰρ τὰ γλυκέα σήπεται θάττον, εὐμετάβλητος γὰρ ὁ χυλὸς ἀσθενέστερος ὢν, δι' ὃ καὶ αἱ μηλέαι καὶ αἱ ῥοαὶ μᾶλλον αἱ γλυκεῖαι τῶν ὀξειῶν· πάντων δὲ αἱ ἥριναι μᾶλλον διὰ τὴν ἀσθένειαν τοῦ τε χυλοῦ καὶ τῆς ὅλης φύσεως. Ἐν σχίνῳ δὲ φυτευόμενα πάνθ' ἤττον σκωληκόβρωτα διὰ τὴν θερμότητα καὶ τὴν ὁσμὴν. Ταῦτα μὲν οὖν τὰ νοσήματα συμβαίνει διὰ τὰς ρηθείσας αἰτίας.

[6] Οἶονται δέ τινες καὶ τὸν σφακελισμὸν ἀπὸ τῶν πληγῶν καὶ τῶν ἔξωθεν γίνεσθαι τραυμάτων καθάπερ καὶ ἐπὶ τῶν ζώων· μετενεχθῆναι γὰρ τοῦνομα κατὰ τὴν ὁμοιότητα τοῦ πάθους. Οὐ μὴν ἔοικεν ἀληθὲς οὐδὲ τοῦτ' ἐπὶ πάντων εἶπερ ὁ ἐρέβινθος ἀπόλλυται σφακελίσας ὅταν ἀνθοῦσιν ὕδωρ ἐπιγινόμενον ἀποκλύσῃ τὴν ἄλμην· τὸ γὰρ ἔφαλμα οἷον σφακελίζειν ἐστίν· φαίνεται δὲ καὶ ἄλλα χωρὶς πληγῆς πάσχειν τοῦτο τὸ πάθος.

[7] Ἐνιοὶ δὲ καὶ τὸ ἀστροβολεῖσθαι σφακελίζειν καλοῦσι· τοῦτο μὲν οὖν τάχ' ἂν ὀνόματος εἴη διαφορά· δι' ὑπερβολὴν γὰρ καὶ ἔνδειαν τροφῆς καὶ οὕτως ἀπόλλυται τὰ δένδρα, τάχα δὲ μᾶλλον δι' ἀπεψίαν καὶ τὴν ἔξωθεν δύναμιν οἷον ὅταν μετὰ τὴν καρποτοκίαν λεπτῆς οὐσῆς ἔτι τῆς ὑγρότητος διὰ τὴν ἀσθένειαν ἐπιγένηται πάγος ἰσχυρός· ἀποθνήσκει γὰρ καταψυχόμενα· τὸ γὰρ ὀρρῶδες καὶ λεπτὸν ψυχρόν, τὸ δὲ παχὺ καὶ ὥσπερ πῖον θερμόν. Αὕτη μὲν οὖν εἴτε διὰ πλῆθος εἴτε δι' ἀπεψίαν εἴτε δι' ἄμφω καὶ ἔτι ἀσθένειαν ἡ φθορά.

[8] Δι' ἔνδειαν δὲ κατ' ἄλλον τε τρόπον καὶ ὅταν αἱ ρίζαι μετέωροι γένωνται καὶ ἐπιφανεῖς· οὐ γὰρ δύνανται παρέχειν ἱκμάδα διὰ τὸν ἥλιον ὥστε συγκάεται καὶ παχύνεται μᾶλλον τοῦ δέοντος ὁ ὁπός, ἐκ τούτου δὲ νόσος καὶ φθορά. Παραπλήσιον δὲ τὸ συμβαῖνον καὶ ὅταν ἐξασχυῶσι δι' ἀνδρίαν, οὐδὲ γὰρ τότε διαδιδόασιν. Βοήθεια δὲ καὶ φυλακὴ πρὸς τὰς ἐνδείας τὸ κινεῖν αἶα καὶ ὁμαλίζειν τὴν γῆν· οὕτω γὰρ τοῦ θέρους ἔλξει τινὰ ἱκμάδα καὶ τοῦ χειμῶνος ἐνυπάρξει μᾶλλον τὸ θερμόν, ὃ διαδίδωσι τὴν τροφήν.

[9] Ἐξ ὑπερβολῆς δὲ διὰ τὴν ἐπομβρίαν. Τότε γὰρ διὰ τὴν ἀτροφίαν, - ἀτροφεῖ γὰρ τὸ μὴ κρατοῦν μηδὲ πέττον, - ἐκλευκαίνεται τε καὶ ἀπόλλυται τὰ δένδρα, καθάπερ ὁ σῖτος· ἐνίοτε δὲ οὐκ ἀπόλλυται μὲν, εἰς δὲ τὴν καρπογονίαν νοσοῦσιν· ἀκαρπεῖ γὰρ τὸ μὴ πέττον μηδὲ κρατοῦν. Τῇ δὲ συκῇ

καὶ νόσημά τι συμβαίνει περὶ τὰς ρίζας, ὃ καλοῦσι λοπαῖν· τοῦτο δ' οἷον μάδισις τίς ἐστι τῶν ριζῶν καὶ (τῶν) μικρὸν ἐπάνω διὰ τὴν πολυϋδρίαν.

[10] Ἐξ ὑπερβολῆς δὲ καὶ τὸ τραγᾶν τῆς ἀμπέλου καὶ ὅσοις ἄλλοις ἀκαρπεῖν συμβαίνει διὰ τὴν εὐβλάστειαν· οὐ δύνανται γὰρ οὐδὲ ταῦτ' ἐκπέττειν, ἀλλ' εἰς τὴν βλάστησιν ἡ ὁρμὴ τρέπεται, καθάπερ ἐπισπωμένη διὰ τὸ πλῆθος. Ὡς ἐπὶ πολὺ δὲ ἐκ τῶν τοιούτων συμβαίνει συκῇ μὲν ψωριᾶν, ἐλάᾳ δὲ λειχηνιᾶν, ἀμπέλῳ δὲ ρεῖν ὥσπερ καὶ Κλειδήμους φησιν· λεπτὸς γὰρ ὁ καρπὸς ἄπεπτος ὢν καὶ ροώδης.

[11] Ἡ βοήθεια δ' ἐν δυεῖν ἓν τε τῷ παραιρεῖσθαι τὴν εὐτροφίαν ὥσπερ καὶ τὰς ἀμυγδαλαῖς καὶ τὰς ρόας τινὲς κολάζουσι καὶ ἐν τῷ δυνάμιν τινα προστιθέναι τῷ δένδρῳ καὶ ἰσχύιν. Τοῦτο γὰρ αἱ τε διακόψεις ποιοῦσι τῆς συκῆς, ὅταν ἄρχηται βλαστάνειν, ὅπως μὴ παλίσκιος οὔσα παχύνῃ τὸν ὀπὸν καὶ αἱ ἀποψιλώσεις τῶν ἀμπέλων καὶ ἀποκνίσεις τῶν οἰνάρων τῶν μεγίστων παρ' ὅλον τὸ θέρος ὥς τινες κελεύουσιν· καὶ αἱ περικαθάρσεις δὲ τῶν ἀνωτάτων ριζῶν καὶ τὰ κλήματα ἐπιβαλλόμενα καὶ ἀποκατάρυγες καθιέμεναι· καὶ ἡ σκαπάνη βοηθεῖ γενομένη καιρία γυμνοῦσα τὰς ρίζας, ὅπως ἐθισθῶσι πνεύματι καὶ ψυχῇ, καθάπερ ἔνιοι κελεύουσι πάγον εὐλαβουμένουσ καὶ μετὰ ταῦτα δὲ τὴν κατεργασίαν ἀποδιδόναι. Πάντα γὰρ ταῦτα τῆς τροφῆς ἀφαιρεῖ καὶ συναυξεῖ τὴν δύναμιν. Ἐναντίως δὲ τοῖς ἐξησθενηκόσι διὰ τὴν ἔνδειαν ἡ κατεργασία καὶ ἡ ἄλλη θεραπεία τὴν τε δύναμιν ἅμα καὶ τὴν εὐτροφίαν ἀποδίδωσιν.

[12] Τὴν δὲ ψώραν οἶονταί τινες γίνεσθαι καὶ ἄλλως οἷον ὅταν ὕδωρ ἐπὶ Πλειάδι γένηται μὴ πολὺ· τότε γὰρ ἀναζυμοῦνται τὰ ἀναθερμαινόμενα καὶ δίδεισιν ἔξω καθάπερ τὰ ἐξανθήματα· ἐὰν δὲ πολὺ γένηται, ἀποκλύζεται τὰ αἷτια, τάχα δὲ καὶ διαδίδωσιν εἰς τὰ ἐντὸς καὶ παύει· συμβαίνει δὲ τότε καὶ τὰ ἐρινὰ καὶ τοὺς ὀλύνθους ἀπορρεῖν· διῴκνεϊται γὰρ εἰς ταῦτα ἡ ὑγρότης· τῆς μὲν οὖν ψώρας ταῦτ' αἷτια τῇ συκῇ λέγουσιν· τῇ δὲ ἀμπέλῳ τοῦ τραγᾶν, ὅταν ἡ ὑπὸ πνεύματος βλαστοκοπηθῇ, ἡ ὅταν τῇ ἐργασίᾳ συμπάθῃ, ἡ τρίτον ὅταν ὑπτία τμηθῇ· συμβαίνει γὰρ πλείω τὸν ἀθροισμὸν γινόμενον μᾶλλον εἰς τὴν βλάστησιν σφοδρτέρως ὁρμᾶν, ὥστε μὴ δύνασθαι καρπογονεῖν.

[13] Τοῦ δὲ ῥύαδα γίνεσθαι δύο αἷτια ἢ ὅταν ἐπινιφθῇ κατὰ τὴν ἀπάνθησιν ἢ ὅταν κρειττωθῇ· τοῦτο δ' εἰ ἀληθὲς ἔοικε κατὰ μὲν τὴν ἀπάνθησιν ὑγρότερος ὢν ὁ ἀήρ ὥσπερ ἀπερυσισθῶν, ἡ δὲ κρείττωσις οἷον ἀντισπᾶν καὶ μεθιστάναι τὴν τροφήν, ὥστε ἐξ ἀμφοτέρων εὐλογον ἀπορρεῖν τὰς ῥάγας καὶ τὰς ἐπιμενούσας μικρὰς εἶναι. Ἡ δ' ἀμβλωσις τῶν ὀφθαλμῶν ὅταν ῥιγῶσι ταῦτόν

καὶ παραπλήσιόν ἐστιν, ὅπερ ἐπὶ τῶν ἀγρίων προβλαστάνειν ἀρχομένων ἐὰν ἐπιγένηται χειμῶν. Πάσχει δὲ τοῦτο καὶ ἡ πρὸ ὥρας ἄνθησις· ἐπ' ἀσθενεῖ γὰρ πνεύσας ἄνεμος ψυχρὸς ἀπέκαυσεν. Ταῦτα μὲν οὖν τῶν δένδρων αὐτῶν ἐστι νοσήματα καὶ πάθη.

[10.1] Τὰ δὲ τῶν καρπῶν οἷον τῶν μὲν βοτρύων ὁ καλούμενος κράμβος· τοῦτο δ' ὅμοιον τῇ ἐρυσίβῃ· γίνεται γὰρ ὅταν ἐπούσης ὑγρότητος μετὰ τὰς ψεκάδας ἐπικαύσῃ σφοδροτέρως ὁ ἥλιος, ὅπερ συμβαίνει καὶ ἐπὶ τῶν οἰνάρων. Μηλέας δὲ καὶ ἐλάας καὶ συκῆς καὶ σκωληκοῦνται οἱ καρποί. Καὶ τὰς μὲν μηλέας καὶ συκᾶς αἰεὶ διαφθείρουσιν οἱ σκώληκες· τὰς δὲ ἐλάας, ἐὰν μὲν ὑπὸ τὸ δέρμα γένωνται, διαφθείρουσιν· ἐξεσθίουσι γάρ· ἐὰν δ' ἐν τῷ ἔσω τὸν πυρῆνα διαφάγωσιν, ὠφελοῦσιν· ἐντὸς γὰρ ὄντες οὐχ ἄπτονται τῆς σαρκός. Κωλύονται δ' ὑπὸ τῷ δέρματι εἶναι ὕδατος ἐπ' ἀρκτούργῳ γενομένου· καταψυχόμενοι γὰρ φεύγουσιν. Νοσεῖ δὲ πολλάκις καὶ τὰ σῦκα καὶ οἱ ἄλλοι καρποί.

[2] Τὸ δ' αἴτιον, ὡς ἀπλῶς εἰπεῖν, ἐν δυοῖν· ἡ γὰρ ἀπ' αὐτοῦ τοῦ δένδρου καὶ τῆς τούτου διαθέσεως ὥσπερ ὅταν ἐν ταῖς ἀμυγδαλαῖς ἡ ὑγρότης κομμιδώδης ὑπογένηται, ἡ ἀπὸ τῶν κατὰ τὸν ἀέρα ξυμβαινόντων· τῇ δ' οὖν ἐλάᾳ καὶ τὸ ἀράχινον ἐμφύεται δι' ὑγρασίαν τινὰ τοῦ ἀέρος τοῦ περὶ αὐτάς, ὃ καὶ διαφθείρει τὸν καρπὸν. Ἡ δὲ ἐκ τοῦ ἔνου βλάστησις ὑδάτων ἐπιγινομένων γίνεται, δι' ἣν ἀποβάλλει τὸν καρπὸν ἐνταῦθα τῆς τροφῆς ῥεοῦσης, ἅτε μὴ ἰσχύοντος τοῦ καρποῦ, τῆς δ' ὑγρότητος ἡθροισμένης. ... τῆς βλαστήσεως. Χεῖριστον δ' ἐὰν ἀνθούσαις ἐφύσῃ καὶ ἐλάαις καὶ ἀμπέλαις καὶ τοῖς ἄλλοις· ἀπορρεῖ γὰρ τὰ ἄνθη καὶ οἱ καρποὶ δι' ἀσθένειαν.

[3] Ἐνιαχοῦ δὲ ἴδια πάθη συμβαίνει, καθάπερ ἐν Μιλήτῳ καὶ Τάραντι περὶ τὰς ἐλάας. Ἐν Μιλήτῳ μὲν γὰρ, ὅταν περὶ τὸ ἀνθεῖν ὥσι, νοτίου ἀέρος ὄντος καὶ εὐδαινεοῦ κάμποι γενόμενοι κατεσθίουσιν αἱ μὲν τὰ φύλλα, αἱ δὲ τὰ ἄνθη ἕτεραι οὔσαι τῷ γένει. Βοηθεῖ δὲ πρὸς ταῦτα, ἐὰν ἐπιγένηται καῦμα· διαρρήγνυνται γάρ. Ἐν Τάραντι δὲ περὶ τὴν ἄνθησιν ὅτε μὲν ἀπερυσσιβοῦνται διὰ τὴν ἄπνοιαν, ὅτε δὲ πνευμά τι πνέον ἐκ τῆς θαλάττης ὀμιχλῶδες καὶ παχὺ προσίζον ἐν τοῖς ἄνθεσιν ἀπόλλυται τὰ ἄνθη τῇ ἄλμῃ· διὰ τοῦτο καλλίστων ὄντων καὶ μεγίστων τῶν δένδρων ἐλάχιστος παρ' αὐτοῖς ὁ καρπός.

[4] Ὅλως δὲ ἕκαστοι τῶν τόπων ἰδίας ἔχουσι κῆρας, οἱ μὲν ἐκ τοῦ ἐδάφους, οἱ δ' ἐκ τοῦ ἀέρος, οἱ δ' ἐξ ἀμφοῖν. Ἐκείνη δὲ αἰτία κοινὴ πᾶσιν ἡ ἀπὸ τῶν πνευμάτων κατὰ τὰς χώρας ἐκάστας, ὅσα θερμὰ τοῦ θερούς πνεῖ καὶ τοῦ ἥρος ψυχρὰ σφόδρα τῶν δένδρων ἄρτι βλαστανόντων καὶ ὑπὸ τὴν ἄνθησιν· τὸ γὰρ

ὄλον ἀληθές καὶ ἐπὶ τούτων, ὅτι δι' ὑπερβολὴν καὶ ἔνδειαν τροφῆς καὶ καύματος καὶ ψύχους νοσοῦσιν·

[5] ἔτι δ' ἂν μὴ κατὰ καιρὸν τὰ πνεύματα καὶ τὰ ὕδατα οὐράνια γένηται. Συμβαίνει γὰρ ὅτε μὲν ἀποβάλλειν γενομένων ἢ μὴ γενομένων ὑδάτων, ὥσπερ τὰς συκᾶς, ὅτε δὲ χεῖρους γίνεσθαι σηπομένους καὶ καταπνιγομένους ἢ πάλιν ἀποξηραιομένους παρὰ τὸ δέον. Ἐπὶ καὶ καύματα ἔνια καὶ βότρυν καὶ ἐλάαν ἀποκάει καὶ ἄλλους καρπούς· τῶν δὲ σκωλήκων πολλοὶ διαφέρουσι μὲν ταῖς μορφαῖς οὐ μὴν ἄλλ' ἐκείνη μείζων ἢ διαφορὰ τὸ μὴ δύνασθαι τὰ ἐξ ἐτέρου δένδρου καὶ καρποῦ μετατεθέντα ἐν ἐτέρῳ γένει σώζεσθαι· τοῦτο δ' εὐλογον· ἐκάστω γὰρ ἐκ τῆς οἰκείας ὕλης ἢ τροφῇ· πλὴν ἴδιον τὸ περὶ τὸν κεράστην καλούμενον ξυμβαῖνον· τοῦτον γάρ φασι καὶ ἐν τῇ ἐλάᾳ γίνεσθαι καὶ εἰς τὴν συκὴν ἐντίκτειν· ἔχει δὲ ἡ συκὴ καὶ ἐξ ἑαυτῆς σκώληκας καὶ τοὺς ἐντικτομένους τρέφει, πάντα δ' εἰς κεράστην ἀποκαθίστανται· φθέγγονται οἷον τριγμόν· περὶ μὲν οὖν νοσημάτων ἱκανῶς εἰρήσθω.

[11.1] Περὶ δὲ φθορᾶς ἀπλῶς τῶν δένδρων ἐκεῖνο πρῶτον δεῖ διελεῖν ὅτι εἰσὶν αἱ μὲν κατὰ φύσιν, (αἱ δὲ παρὰ φύσιν). Κατὰ φύσιν μὲν αἱ γήρα καὶ δι' ἀσθένειαν αὐάνσεις ὥσπερ ἀποπνεόντων καὶ ἀπομαραιομένων αὐτομάτων· παρὰ φύσιν δὲ αἱ ἀπὸ τῶν ἔξωθεν, τούτων δὲ αἱ μὲν βιαιότεραι φαίνονται καθάπερ ἐὰν κοπὲν ἢ πληγὲν, αἱ δ' ἦττον αἱ διὰ χειμῶνας ἢ πνεύματα, πασῶν δ' ἥκισθ' αἱ διὰ νόσον ὥσπερ ἐπὶ τῶν ζώων· ἐγχρονίζουσι γὰρ αὐταὶ μάλιστα δι' ὃ καὶ οὐδὲ φαίνονται παρὰ φύσιν ὁμοίως ἐν τε ζώοις καὶ φυτοῖς εἴπερ ἐκείνη τῆς φύσεως ἢ ἔκλειψις.

[2] Ἔστι δέ τις καὶ ἐτέρα ἢ διὰ τὴν εὐκαρπίαν καὶ πολυκαρπίαν· ταῦτα μὲν οὖν, ὥσπερ ἐλέχθη, φύσει βραχύβια ἐξαναλίσκομένης ἐνταῦθα τῆς οὐσίας, ὅσα πολυκαρπήσαντα ἀφαναίνεται καθάπερ ἐλέχθη· συμβαίνει γὰρ τοῦτο πλείοσιν· ἐπεὶ καὶ ἐλάαι αἱ νέαι δοκοῦσι φθείρεσθαι δι' εὐκαρπίαν ὅτι οὐπω τετελεσμένοι τὴν τῆς αὐξήσεως τροφήν ἐξαναλίσκουσιν εἰς τοὺς καρπούς· ταύτην δ' οὐ τῶν κατὰ φύσιν ἂν τις θεῖη τὴν φθορὰν οὐδ' ὥς ἀπὸ τῶν ἔξωθεν καὶ βιαίως, ἀλλ' ὥς ἀπ' αὐτῶν διὰ τὴν ἐπὶ πλέον ὁρμὴν τοῦ συμμετρου πρὸς τὸν καρπὸν ἢ συναίτιός πως καὶ ὁ ἀήρ καὶ ἡ τοῦ ὄλου κατάστασις· εὐκαρπία γὰρ γίνεται τοιαύτη διὰ τὴν τοῦ ἀέρος εὐκρασίαν· ταύτην μὲν οὖν εἴτε κατὰ φύσιν εἴτε παρὰ φύσιν εἴτε καὶ μέσσην τινὰ χρὴ λέγειν οὐδὲν διαφέρει.

[3] Τάχα δὲ καὶ γένει τινὶ δένδρων ἔνια κατὰ φύσιν αὐτομάτως τε γινόμεναι καὶ οὐ κακουμένοις, ἀλλ' εὐθενοῦσι, οἷον τῆς πεύκης ὅταν αἱ ρίζαι δαδωθῶσι· πάσχουσι μὲν γὰρ τοῦτο δι' εὐτροφίαν καὶ ὑπερβολὴν, ἅμα δὲ τῇ δαδώσει τὴν

τροφὴν οὐ διεῖσαι φθείρονται. Καὶ ἔοικε παραπλήσιον τὸ συμβαῖνον καὶ ἐπὶ τῶν ζώων, ὅταν ὑπερπαχυνθῶσιν· οὐ δυνάμενα γὰρ ἔλκειν τὴν πνοὴν οὐδ' ὅλως τῷ πνεύματι χρῆσθαι διὰ τὴν σύμφραξιν καὶ τὴν πύκνωσιν ἐκεῖνά τε ἀποπνίγονται καὶ αἱ πεῦκαι δι' ὃ καὶ οὐ κακῶς οἱ ὀρείτυποι τοῦνομα τέθεινται· φασὶ γὰρ ἀποπνίγεσθαι τὴν πύκην διὰ τὴν πύκνωση· πάντα γὰρ ὡς ἔοικε δεῖται πνεύματός τινος ἢ μανώσεως ἢ πόρων. Τὰς μὲν οὖν τοιαύτας μᾶλλον ἢ τις θείῃ φυσικὰς ἐκείνας δὲ ὁποτέρως δεῖ προσαγορεύειν μηδὲν διαφερέτω καθάπερ ἐλέχθη.

[12.1] Περὶ δὲ τῶν κατὰ φύσιν λεκτέων ἐπεὶ αἱ κατὰ φύσιν ἀπλαῖ τινές εἰσι καὶ φανεραί. Τούτων δὲ σχεδὸν ἐν δυοῖν αἱ αἰτίαι τῶν κατὰ τὸν ἀέρα γινομένων ὑπερβολῇ ψύχους τε καὶ καύματος· αἱ γὰρ δι' ἐνδειαν τροφῆς οἶον ἢ λειψυδρίαν ἢ χώρας κακίαν ἕτερον εἶδος ἔχουσι καὶ φανεραὶ ἐκ τῶν εἰρημένων. Αἱ μὲν οὖν ὑπὸ καύματος ἐλάττους ἂν μὴ τις αὐχμὸς ὑπερβάλλων γένηται, καὶ οὗτος δὲ μᾶλλον τᾶλλ' ἀπόλλυσιν ἢ τὰ δένδρα, ταῦτα δ' ἂν συνεχῆς γίνηται καὶ πλείω χρόνον· ἀλλ' οἷα δὴ τὰ ἐπέτεια καύματα γίνεται κατὰ τὸν οἰκεῖον καιρὸν οἶον ὑπὸ κύνα ἀπόλλυται τὰ φυτὰ ἀστροβολούμενα καὶ ἐὰν ἄρα τι τύχη πεπηρωμένον ἢ ἀσθενές· οὐδὲ γὰρ ταῦτ' ὑπομένει.

[2] Ὑπὸ δὲ τοῦ χειμῶνος πλείω καὶ κατὰ πλείους τρόπους, ὅτε μὲν γὰρ αἱ αἰθρίαι καὶ πάγων σφοδρότητες ἐκπηγνύουσιν, ὅτε δ' ἄνεμοι ψυχροὶ πνεύσαντες ἀπέκαυσαν· ἐνίοτε δὲ καὶ ἀπνοίας οὔσης ἢ μετρίας πνοῆς, οὐ καθαροῦ δὲ τοῦ ἀέρος, ἀλλὰ θολεροῦ καὶ ἐπινεφοῦς. Καὶ σχεδὸν οὕτως ἢ γε τῶν δένδρων γίνεται πῆξις ἐάν τε μὴ ὁ οὐρανὸς ᾗ. Γίνεται δὲ περὶ μὲν Ἀρκαδίαν καὶ Εὐβοίαν αἰθρίας καὶ πνεύματος, περὶ δὲ Θετταλίαν καὶ τούτους τοὺς τόπους ἀπνοίας καὶ ἐπινεφοῦς, οὐ μὴν ἀλλὰ καὶ πνευμάτων ὄντων συμβαίνει τὸ πάθος, ὅταν περ τὰ ὄρη λάβῃ χιόνα τὰ περικείμενα καθ' ἐκάστους τόπους· ἀφ' ἐκάστου γὰρ αἱ ἀπόπνοια καὶ τὸ ψύχος τὸ ἀποκάον, ὅτε δὲ νηνεμίας οὔσης εἰσδυόμενος ὁ αἴρ.

[3] Ὁ δὲ λέγουσιν, ὡς ἦττον γίνεται περὶ Εὐβοίαν καὶ τὴν Βοιωτίαν, ὅταν ἡ ὀρχομενία λίμνη πληρωθῇ, τάχ' ἂν τις ἀμφοτέρως λάβῃ καὶ ὡς κατὰ συμβεβηκός, ὅτι ἔπομβρα συμβαίνει τότε μᾶλλον εἶναι τὰ ἔτη καὶ χιόνα μὴ πίπτειν καὶ ὡς ὑδροδεστέραν τὴν ἀναθυμίασιν γινομένην διὰ τὸ ἀπὸ πλέονος· ἢ τοιαύτη δ' ἦττον ψυχρὰ καὶ κακοποιός· καὶ φανερόν ἐν τισι τόποις γέγονεν· ἀλειυνότεροι γὰρ γεγέννηνται λιμνωθέντων τῶν πλησίων·

[4] πνεῖ δὲ τὰ πνεύματα τὰ ἀποκαίοντα περὶ γε τοὺς κατὰ τὴν Ἑλλάδα τόπους ἀπὸ δυσμῶν ὥσπερ ὁ Ὀλυμπίας ὁ ποιῶν ἄλλοθι τε καὶ ἐν Χαλκίδι τὸν

καλούμενον καυθμόν· ἐν Θετταλία γὰρ ἀμφοτέρωθεν πνέοντες ἐκπηγνύουσιν· ἡ δ' ὥρα τῆς πνοῆς μάλιστα πῶς περὶ τροπὰς ὑπὸ τὰς τετταράκοντα· τότε γὰρ καὶ ὁ ἀῆρ ὅλως ψυχρότατος. Τὰ μὲν οὖν γινόμενα ταῦτ' ἐστίν, ἡ δ' αἰτία σχεδὸν ὡς καθόλου γε εἰπεῖν φανερά· τὸ γὰρ θερμὸν ἐξελαυνόμενον ὑπὸ τοῦ ψύχους συνεξάγει καὶ τὸ ὕγρὸν ὥστε διαπνεῖσθαι.

[5] Συμβαίνει δὲ τοῦθ' ὡς ἐπὶ τὸ πλεον ἐν τοῖς ὑπὲρ γῆν, τὰ δὲ κατώτατα περὶ τὰς ρίζας ἀπαθῆ, πολλάκις δὲ καὶ αὐτοῦ τι τοῦ στελέχους· οὐ μὴν ἀλλ' ἐνίοτε διῴκνεϊται καὶ πρὸς τὰς ρίζας ὥσθ' ὅλως ἐξουαίνειν τὸ δένδρον· ἀπλῶς γὰρ ἄνωθεν ἡ ἀρχὴ καὶ ἡ παρείσδυσις τοῦ ψύχους εἴτ' ἀπὸ τούτων ὥσπερ ὀχετῶν τινων καταβαίνει πρὸς τὰ κάτω δι' ὃ καὶ παρ' οἷς συμβαίνει τὸ πάθος κατακρύπτουσι τὰς ἀμπέλους καὶ τὰς συκᾶς θαμνώδεις ποιοῦσιν· οὐδὲν δὲ δεῖ πολλῆς γῆς, ἀλλὰ μετρία τις ἐποῦσα δύναται διατηρεῖν·

[6] ἔνιοι δὲ μόνον παρὰ τὰ ἄκρα τῶν κλημάτων καὶ τὰς κράδας αὐτὰς καθάπερ ἐν τε τῷ Πόντῳ καὶ περὶ Μήδειαν οἶον ἐμφράττοντες τὰς ἀρχάς· ἐὰν γὰρ ταῦτα συγκλεισθῇ καίπερ τᾶλλα ὄντα γυμνὰ οὐδὲν πάσχουσι διὰ τὸ μὴ ἔχειν εἴσοδον. Διῴκνεϊται γὰρ ἀπὸ τῶν ἄνω πρὸς τὰ κάτω καὶ τὰς ρίζας· ἡ δ' ιδιότης ἰσχυρὰ καθάπερ ὑφ' ἡλίου καὶ χρόνου πολλοῦ διὰ τὴν σφοδρότητα καὶ τὴν ἰσχὴν τοῦ ψύχους· ἐξάγει γὰρ μᾶλλον καὶ ἀθροώτερον τὸ ὕγρὸν ἅμα τῷ θερμῷ.

[7] Τὸ δὲ πονεῖν μάλιστα τῶν τόπων ὅσοι κοῖλοι καὶ ὅσοι περὶ τοὺς ποταμοὺς καὶ ὅλως τοὺς ἀπνευστοτάτους οὐκ ἄλογον. Ἰσταται γὰρ μάλιστα ἐνταῦθα φερόμενον τὸ πνεῦμα καὶ πλεῖστον διατρίβει χρόνον ὥστε καὶ μάλιστα ἀπεργάζεται. Καὶ γὰρ ὅπου μὴ διὰ πνεύματα τὸ πάθος, ἀλλὰ διὰ παρουσίαν καὶ στάσιν τινὰ τοῦ ἀέρος γίνεται καθάπερ ἐν Μακεδονίᾳ τε καὶ Θετταλίᾳ ἐνιαχοῦ καὶ περὶ Φιλίππους ἐνταῦθα οἱ κοῖλοι τόποι μάλιστα πονοῦσιν· ἐφεστικῶς γὰρ ὁ ἀῆρ πῆγνυται καὶ πῆγνυσιν καὶ τὸ ὅλον πλείω χρόνον ἐργάζεται. Κατὰ δὲ τοὺς ὑπτίους οὐδὲ γίνεται πῆξις ὅλως ὥσπερ ἡ τοῦ ὕδατος ἢ πνεύματος· κωλύει γὰρ ἡ κίνησις.

[8] Ἄλλ' ἐκεῖνο θαυμαστὸν καὶ λόγου δεόμενον ὅτι οὐ τὰ ἀσθενέστατα μάλιστα πονεῖν εἴωθεν, ἀλλ' ἐνίοτε τὰ ἰσχυρὰ μᾶλλον· ἐλάαν γὰρ καὶ συκὴν οὐδὲν ἄλογον ἀποκαυθῆναι· τῆς μὲν γὰρ μετέωροι, τῆς δὲ μαναὶ αἱ ρίζαι, ὥστε καὶ ἄνωθεν τὸ ψύχος διῴκνεϊσθαι· καὶ ἡ ἄμπελος δὲ ἔχει τινὰ αἰτίαν ἐκ τῆς φύσεως καὶ ἐκ τῆς ἐλκώσεως τῆς περὶ τὴν τομήν· ἀλλὰ τὸ τὸν κότινον μᾶλλον πονῆσαι τῆς ἐλάας ἄτοπον καὶ τὸ τὴν ρόαν μηδὲν παθεῖν ἀσθενῇ πρὸς τοὺς χειμῶνας οὔσαν· ἐκπῆγνυσθαι γὰρ τάχιστα δοκεῖ.

[9] Καὶ γὰρ εἰ διαφέρουσιν αἱ ἐκπῆξεις αἱ ὑπὸ τῶν πάγων καὶ τῶν πνευμάτων ὅλως οὐκ ἄλογον ἀμφοτέρων τὰ ἀσθενέστατα μάλιστα ὑπακούειν, εἰ μὴ ἄρα τὸ αὐτὸ γίνεται καὶ ἐνταῦθα τῷ πρότερον εἰρημένῳ· μᾶλλον γὰρ ἐφίσταται καὶ ἐμμένει τοῖς πυκνοῖς ἢ τοῖς μανοῖς, τὰ δὲ μανὰ διΐησιν ὃ καὶ τοῦ μὴ ἐκπῆγνυσθαι τὰς μηλέας αἴτιον ἢ ἡττόν γ' ἐτέρων ἀσθενεῖς οὕσας ὥσπερ καὶ περὶ Θετταλίαν· τῇ γὰρ μανότητι διΐησιν καὶ οὐκ ἀποστέγει· τὸ δὲ μὴ χρονιζόμενον μηδὲ ἀθρόον οὐδ' ἐργατικόν, ὥσπερ οὐδ' ἐν τοῖς κεραυνοῖς. Δεῖ δὲ δυοῖν θάτερον ἢ μὴ δέχεσθαι, καθάπερ τὰ πυκνὰ καὶ ἰσχυρὰ, τοιοῦτον γὰρ ἢ ἄπιος καὶ τὰ ἄγρια δὲ καὶ τὰ ἄκαρπα ἔτι μᾶλλον οἶον πετέα, ὀστρή, ἢ δεξάμενον διΐεναι καὶ μὴ κατέχειν. Ὑπὲρ μὲν οὖν τούτων ἐνταῦθά που τὸ αἴτιον.

[10] Ἡ δὲ τοῦ πνεύματος φορὰ, καθ' ὃν ἂν γένηται τόπον, ἐπέκλυσεν οἶον ποταμός τις ῥυεῖς, ὥσπερ ἐν τοῖς λοιμοῖς δι' ὃ καὶ τὰ ἀπτόμενα καὶ τὰ σύνεγγυς ἀπαθῇ πολλάκις, ἐνίοτε δ' οὕτως εἰς ἀκριβὲς διῆλθεν, ὥστε τῶν ἐπὶ τοῦ αὐτοῦ κλήματος ὀφθαλμῶν οἱ μὲν ὑγιεῖς, οἱ δὲ πεπηγότες εἰσὶν· πολλάκις δὲ κεκρυμμένης ὑπὸ χιόνος ὅλης τῆς ἀμπέλου, γίνεται γὰρ τοῦτο ἐν τοῖς ψυχροῖς τόποις, ἐὰν λάβῃ γυμνὰ τὰ ἄκρα κλήματα, ταῦτα ἀπέκαυσε καὶ ἀπὸ τούτων διαδίδωσι πρὸς τὰς ρίζας ... ὥστ' ἐνίοτε ζῆν· [11] περὶ δὲ τὸν Πόντον ὑπὸ τῶν πνευμάτων ἐκπῆξις γίνεται, ὅταν αἰθρίας οὔσης (λεπίδες) καταφέρωνται· ταῦτα δὲ ἐστὶ πλατέα ἄττα φερόμενα μὲν φανερά, πεσόντα δ' οὐ διαμένει· δῆλον δὲ ὅτι πῆξις τις τῆς ὑγρότητος ἐν τῷ ἀέρι, καθάπερ τῆς πάχνης· ὅταν οὖν τοιοῦτος ὁ ἀήρ προσπίπτων ὑπὸ τοῦ πνεύματος ἢ καὶ ταῦτα συγκαταφέρηται, κατὰ λόγον ἢ ἐκπῆξις γίνεται. Τὰ δὲ πνεύματα τοῖς μὲν ψυχροῖς φύσει τῶν τόπων, ὥσπερ ἐγχώρι' ἄττ' ἂν εἴη, καθάπερ ἐν τῷ Πόντῳ καὶ τῇ Θράκῃ, τοῖς δ' ἁλεινότεροις ἐκ τῶν ἔξωθεν ἢ ἐπιφορὰ, καθάπερ ἐν Εὐβοίᾳ· δηλοῖ δὲ καὶ ἡ φύσις, ὥς οὐκ αὐτόθεν καὶ οὐκ ἐκ στασίμου τινὸς καὶ ὅλου πνεύματος, ἀλλ' ἢ ἂν τοῦτο τύχη, ῥυέν· οὐδὲ γὰρ ἂν ἦν ἀκέραια τὰ πλησίον· τῶν μὲν οὖν πνευμάτων καὶ αὕτη τις ιδιότης.

[13.1] Ὁ δὲ τῆς γῆς πάγος χαλεπώτατος, ὅταν περιβεβηρωμένα καὶ γυμνὰ λάβῃ τὰ δένδρα, μάλιστα δὲ ἐὰν καὶ ὕδωρ ἐνεσθηκός· ἐὰν διαμένη πλείω χρόνον, ἐξέπηξεν εἰς ἀσθενεῖς τε καὶ γυμνὰς τὰς ρίζας εἰσδύόμενος· ἐπεὶ καὶ ὅλως ἂν διειργασμένην λάβῃ τὴν γῆν, χαλεπώτερος· μανῆς γὰρ οὔσης, ἐσικνεῖται μᾶλλον· ἀπαθέστεραι δὲ, ἐὰν κεκοπρισμένη τύχη· θερμὴ γὰρ ἢ κόπρος οὔσα βοηθεῖ· εὐλόγως δὲ καὶ χιόνος πεσοῦσης καὶ ἐὰν ἀναζυμωμένης τῆς γῆς ἐπιγένηται ψύχη καὶ πάχνη καὶ πάγος ἐκπῆγνυσιν· καὶ διαδύεται διὰ

τὴν μανότητα καὶ αὐτὴν τὴν γῆν πῆγνυσιν.

[2] Ὁ δὲ τῆς γῆς πάγος ὀλεθριώτερος τοῖς δένδροις· ἄπτεται γὰρ μᾶλλον τῶν ρίζων· ὁ δὲ τοῦ ὕδατος καὶ ἦττον· χαλεπώτερος δὲ καὶ οὗτος κάκεϊνος, ὅταν ἀνίῃ καὶ πάλιν ἐπιπηγνύηται καὶ τοῦτο ποιῇ πολλάκις· ἐξαίρειται γὰρ τὴν δύναμιν· ὁ δὲ συνεχῆς ἐγκατακλείσας τὸ θερμὸν οὐχ ὁμοίως πλὴν ἐὰν ὑπερβάλλῃ τῷ χρόνῳ· καὶ χαλεπώτερος δ' ὅλως ὁ κάτωθεν πάγος ταῖς μὴ εὐγείοις μὴδὲ πυκναῖς μὴδ' ἐνίκμοις· οὐδὲ γὰρ ὁμοίως θερμαίνει, καὶ διαδύεται δὲ πορρωτέρω καὶ ἄπτεται τῆς ρίζης.

[3] Συμβαίνει δὲ τὰς μὲν τῶν βλαστῶν ἐκπήξεις καὶ ἀπλῶς τῶν ἄνω πολλάκις γίνεσθαι, τὰς δὲ τῶν ρίζων καὶ ὅλων τῶν δένδρων ὀλιγάκις καὶ παρ' ὀλίγοις· αἴτιον δὲ τὸ ἔχειν προβολὴν καὶ οἶον ἀποστεγασμα τοῦ ψύχους τὴν γῆν, εἰς ἣν καὶ συνελαύνεται τὸ θερμὸν· ἐνίοτε δ' οὐκ ἀπόλλυται οὐδὲ τὰ ἄνω, ἀλλὰ μᾶλλον ἐπικάεται. Καὶ ταῦτ' οὐκ εὐθὺς ἀφαιρεῖν δεῖ· πολλάκις γὰρ ἅμα τῇ ὥρᾳ διεβλάστησε καὶ αὐτὰ τὰ φύλλα δοκοῦντα αὖα εἶναι πάλιν ὑγράνθη καὶ ἐγένετο χλωρά.

[4] Δι' ὃ καὶ οὐκ ἄτοπον, εἴ τι συνέβη τοιοῦτον, ὥστε ἐλάας αὐανθείσης καὶ αὐτῆς καὶ τῶν φύλλων πάλιν ἀναβλαστῆσαι· οὐ γὰρ ἦν αὐανσις, ἀλλὰ φαινομένη τις ξηρότητι καὶ τῇ ἄλλῃ χρώα, πρὸς δὲ τὴν ἀρχὴν οὕτε τὴν τῶν φύλλων διῆκεν, ἔτι δὲ ἦττον τῶν βλαστῶν καὶ τῶν ἀκρεμόνων. Ὅμοίως δὲ καὶ ἐπ' ἄλλων τινῶν τοῦτο συμβαίνει, μάλιστα δ' εἰκὸς ὧν τὸ φύλλον σαρκῶδες καὶ αὐτὰ τῇ φύσει θερμά· τὰ γὰρ ἀσθενῆ καὶ λεπτὰ τοῦτ' οὐ πάσχει, καθάπερ τὰ τῶν μυρρίνων, ἀλλὰ καὶ τάχιστα ἀποκάεται· λεπτὰ γὰρ καὶ αὐτὰ τὰ κλωνία καὶ ἀπαλὰ τῇ φύσει καὶ ὅλον τὸ δένδρον οὐ θερμὸν, δι' ὃ καὶ ἐκπῆγνυται τάχιστα· ἢ γὰρ αὖ δάφνη, καίπερ οὕσα μανῆ, καὶ διαμένει διὰ τὸ θερμὸν, ἢ δὲ ρόα καὶ ἢ συκῇ μανὰι τε καὶ ὕγραι καὶ οὐχ ὁμοίως θερμαί· [5] ταχεῖα δὲ ἢ ἐκ τῶν ἐκπηγνυμένων ἀναβλάστησις, ὅτι συμβαίνει τὴν ρίζαν ἰσχυρὰν γίνεσθαι καὶ πλήρη συνηθροισμένης τῆς ἑνὸς τροφῆς ἦν οὐ διέδωκεν, ἔτι δὲ τὴν πρότερον οὐ πολλὴν καὶ ἰσχυρὰν διανεμομένην τότε· εὐλογον ἀναλίσκεσθαι, ὥστ' εὐλόγως καὶ ἢ αὖξῆσις ταχεῖα καὶ ἢ καρποτοκία. Τοῦτο μὲν οὖν ὁμολογουμένως γίνεται παρὰ πᾶσιν.

[6] Ὁ δὲ τινες θαυμάζουσιν, ὅτι ἢ μὲν χιὼν οὐκ ἐκπῆγνυσιν, ἢ δὲ πάχνη μετριωτέρα τῆς χιόνος οὕσα, οὐδὲν ἄτοπον· πρῶτον μὲν ὅτι ἢ μὲν οὐκ ἐπιμένει, ἀλλ' ἀποτίκεται ἀπὸ τῶν κλημάτων καὶ τῶν βλαστῶν, ἢ δὲ πάχνη ταῦτ' ἀποκάει· ἔπειτα καὶ ἢ διάθεσις αὐτῇ τοῦ κλήματος· ἢ μὲν γὰρ ἀβλαστοῦς, ἢ δὲ βεβλαστηκότος ἄρτι πίπτει ὅτε ἀσθενέστατον ἐνίοτε δὲ

ἀνοιδούντος πρὸς τὴν βλάβησιν ὅτε οὐχ ἦττον ὥς εἰπεῖν ἐπίκηρον ἐπὶ πᾶσι διϋγραινομένου ἤδη καὶ μανουμένου· ἔτι καὶ λεπτοτέρα τῆς χιόνος, ὥστε δι' ἄμφω σφοδροτέραν τὴν πῆξιν εἶναι.

[7] Ἡ δὲ χιών ὅλως οὐδ' ἂν ἐπιμείνειεν ἐπὶ τοῖς κλήμασι μὴ κατακρυπτομένης ὅλης. Ὅταν δὲ τοῦτο πάθῃ, σκεπάσει τῷ ἐπιμένειν ἐγκατακλείουσα τὴν θερμότητα καὶ ἀποστεγούσα τὴν ἔξω, καθάπερ καὶ τὴν γῆν· τὸ δ' ὅλον καὶ τμητικώτερα δοκεῖ ἢ πάχνη τῆς χιόνος εἶναι, δι' ὃ καὶ τὰς νεοὺς οἶονταί τινες βελτίους ταύτην ποιεῖν· διαχεῖν γὰρ τὰς βώλους διαδυομένην καὶ δάκνουσαν τῷ συνεστάναι μᾶλλον· λεπτοτέρα δ' ἐστὶ τῆς χιόνος ὅτι ἢ μὲν ἐκ νέφους καὶ οἶον ἀφρός τις ἐμπεριεληφυῖα πνεῦμα, ἢ δ' αὐτὴ καθ' αὐτὴν συνεστηκυῖα καὶ ἐκ λεπτοτέρου τινὸς ἀέρος καὶ ὕγρου· τούτων μὲν οὖν ταύτας ὑποληπτέον τὰς αἰτίας.

[14.1] Αἱ δ' ἐκπήξεις ὅλως πότερον διὰ τὴν παχύτητα τοῦ ἀέρος ἢ διὰ τὴν λεπτότητα γίνονται καὶ εἰ δι' ἄμφω, διὰ πότερον μᾶλλον, ἀπορήσειεν ἂν τις· εἰ μὲν γὰρ οὐδὲ τοῦ ἀέρος γίνεται πῆξις, ὅταν μὴ αἶθριος ὁ ἀήρ, μὴδ' ἂν τοῦ παχέος δόξειεν· ὁ γὰρ αἶθριος λεπτότερος, ἅμα δὲ καὶ διαδυτικώτερος ὁ λεπτὸς, ἢ δ' ἐκπήξεις εἰσδυομένου τοῦ τέμνοντος, ἔτι δ' εὐψυχότερος καὶ εὐπαθέστερος ὅλως ὁ λεπτὸς· διὰ τοῦτο γὰρ καὶ τὰ ὕδατα προθερμανθέντα ψύχεται καὶ πῆγνυται θάττον ὅτι λεπτύνεται τῇ θερμότητι.

[2] Συνεπιμαρτυρεῖν δὲ καὶ οἱ τόποι δοκοῦσιν οἱ ἐναῖθριοι λεγόμενοι· πλείω γὰρ ἐκπῆγνυται καὶ πλεονάκις ἐν τούτοις ἐνιαχοῦ μὲν καὶ μικρὸν πάνυ διεχόντων, ὥσπερ ἐν Κορίνθῳ τὸ Κράνιον καὶ τὸ Ὀλύμπιον. Σκληραὶ γὰρ αἱ αἰθρίαι σφόδρα περὶ τὸ Κράνιον, ὥστε καὶ τοῖς φυτοῖς καὶ τῇ αἰσθήσει δῆλον εἶναι. Ἐνιαχοῦ δὲ καὶ ἐπὶ πλείονι διαστήματι. Καὶ ὅλως οἱ πρότερον οὐκ ἐκπῆγνυντες τόποι παχέος ὄντος τοῦ ἀέρος νῦν ἐκπηγνύουσι, καθάπερ οἱ περὶ Λάρισσαν τὴν ἐν Θετταλίᾳ· τότε μὲν γὰρ ἐνεστηκότος ὕδατος πολλοῦ καὶ λελινωμένου τοῦ πεδίου παχὺς ὁ ἀήρ ἦν καὶ ἡ χώρα θερμότερα· τούτου δ' ἐξαχθέντος καὶ ἐνίστασθαι κωλυθέντος ἢ τε χώρα ψυχροτέρα γέγονε καὶ ἐκπήξεις πλείους·

[3] σημεῖον δὲ λέγουσιν, ὅτι τότε μὲν ἦσαν ἐλάαι καὶ ἄλλοθι καὶ ἐν αὐτῷ τῷ ἄστει μεγάλαι καὶ καλαὶ νῦν δὲ οὐδαμοῦ, καὶ αἱ ἄμπελοι τότε μὲν οὐκ ἐξεπῆγνυντο νῦν δὲ πολλάκις. Ὅτι δὲ τὸ ὕδωρ οὐκ ἀεὶ ψυχροτέρας ποιεῖ, ἀλλ' ὅπερ καὶ τὸ πρότερον ἐλέχθη σημεῖον τὸ περὶ Αἶνον γενόμενον· αὕτη γὰρ ἀλεινοτέρα δοκεῖ νῦν γεγονέναι πλησιαίτερον ὄντος τοῦ Ἑβρου· ταύτη μὲν οὖν δόξειεν ἂν ὁ λεπτὸς ἀήρ πηκτικώτερος εἶναι· τῇ δὲ πάλιν ὁ παχύτερος·

ἀκινήτοτερος γάρ, ὁ δ' ἀκίνητος εὐπηκτότερος·

[4] ἔτι δὲ αἱ στύγες ἐν τοῖς τοιούτοις γίνονται τόποις, αἵπερ μάλιστα εἰσδύονται εἰς τὰ σώματα· φυλάξασθαι γὰρ οὐκ ἔστιν οὐδ' ἐν τοῖς στρώμασι κατακείμενον· ἐπιβεβαιοὶ δὲ καὶ τὸ ἐν τοῖς ὄρεσιν ἦττον, ἢ ἐν τοῖς πεδίοις ἐκπηξιν γίνεσθαι· λεπτότερος γὰρ ὁ ἀήρ καὶ εὐκινήτοτερος. Οἱ δὲ καθ' ἕκαστα τόποι καὶ ἐπὶ τούτων πίστιν ἔχουσι· τῆς τε γὰρ Θετταλίας περὶ Κίθρον μάλισθ' ὥς εἰπεῖν ἐκπηξίς ἐστιν· ὁ δὲ τόπος κοῖλος καὶ ἐφυδρός·

[5] ἔν τε Φιλίπποις πρότερον μὲν μᾶλλον ἐξεπήγνυντο, νῦν δ' ἐπεὶ καταποθείς ἐξήρανται τὸ πλεῖστον ἢ τε χώρα πᾶσα κάτεργος γέγονεν ἦττον πολὺ· καίτοι λεπτότερος ὁ ἀήρ δι' ἄμφω καὶ διὰ τὸ ἀνεξηράνθαι τὸ ὕδωρ καὶ διὰ τὸ κατειργάσθαι τὴν χώραν· ἡ γὰρ ἀργὸς ψυχροτέρα καὶ παχύτερον ἔχει τὸν ἀέρα διὰ τὸ ὑλώδης εἶναι καὶ μήτε τὸν ἥλιον ὁμοίως διῴκνεῖσθαι μήτε τὰ πνεύματα διαπνεῖν ἅμα δὲ καὶ αὐτὴν ἔχειν ὑδάτων συρροάς καὶ συστάσεις πλείους· [6] ὁ καὶ περὶ τὰς Κρηνίδας ἦν τῶν Θρακῶν κατοικούντων. Ἄπαν γὰρ τὸ πεδῖον δένδρων πλῆρες ἦν καὶ ὑδάτων· ὁπότε νῦν μᾶλλον πρότερον ἐκπήγνυσιν ἐξηραμμένων τῶν ὑδάτων οὐ τὴν λεπτότητα τοῦ ἀέρος αἰτιατέον ὥς τινές φασιν. Αἱ μὲν οὖν αἰτίαι ὑπὲρ ἑκατέρου καὶ τοιαῦται τινες. Ἴσως δ' ἀμφοτέρων γινομένων ἐκπήξεων, τοῦτο γὰρ φανερόν ἐκ τῶν εἰρημένων, διαφέρει καὶ τόπος τόπου (καὶ ἀήρ ἀέρος) τῷ μᾶλλον παχύνεσθαι καὶ λεπτύνεσθαι· ὁ γὰρ ὑδατώδης καὶ θολερὸς οὐχ ὁμοίως ἐργατικός· οὐδ' αὖ πάλιν ὁ λεπτὸς, καὶ γὰρ εὐκίνητος καὶ οὐκ ἔμμονος· [7] ἡ πῆξις δὲ δεῖται χρόνου, ἔτι δὲ καὶ τὰ ἐπιγινόμενα δεῖ ποῖ' ἅττα εἶναι καὶ τὴν ὅλην κατάστασιν καὶ εἴ τι ἄλλο τῶν ἐξωθεν· εἰ γὰρ αἱ μεταβολαὶ ταχεῖαι πρὸς τὰς ἀνέσεις, κωλύουσιν· ἂν αἱ πῆξεις. Ὡς δ' ἀπλῶς εἰπεῖν εὐπαθέστερος μὲν εἰς τὸ πάσχειν ὁ λεπτός· ὅταν μέντοι καταψυχθῇ ὁ παχύτερος ψυχρότερος, ὥσπερ καὶ θερμότερος· ἔμμονος γὰρ μᾶλλον ἢ θερμότης καὶ ἡ ψυχρότης ὥσπερ καὶ ἐν τοῖς ἄλλοις τοῖς σωματωδεστέροις. Δι' ὃ καὶ εἴ που μὴ ὑδατώδης, ἀλλ' ἅμα τῷ πάχει ξηρὸς οὐκ ἄλογον εἰ μᾶλλον ἐκπηκτικός. Ἀλλὰ γὰρ περὶ μὲν τούτων ἱκανῶς εἰρήσθω.

[8] Ἡ δὲ τοῦ καύματος ὑπερβολὴ τὰ μὲν φυτὰ καὶ τὰ παντελῶς νέα φθείρει διὰ τὴν ἀσθένειαν, ὥσπερ καὶ τὰ ἐπέτεια, τὰ δ' ἐρριζωμένα καὶ ἔχοντα μέγεθος οὐ φθείρει διὰ τὸ μὴ δύνασθαι διαδύεσθαι μηδὲ ὁμοίως θιγγάνειν τῆς ἀρχῆς, ἀλλ' εἵπερ τοὺς βλαστοὺς καὶ τοὺς καρποὺς ἐπικάει. Καὶ τὸ ὅλον ἴσως ἀλλοτριώτερον τῇ φύσει τὸ ψυχρόν· ἐπεὶ ὥς γ' ἀπλῶς εἰπεῖν ἐπὶ πάντων γίνεται ἡ φθορὰ ταῖς ὑπερβολαῖς ὅσα συνεργεῖ πρὸς τὸ ζῆν·

[9] καὶ γὰρ χώρα τις ἄφορος ἢ μὲν διὰ λιπαρότητα, ἢ δὲ διὰ λεπτότητα καὶ ἄηρ κωλύει περισκελῆς ὢν ἐφ' ἐκάτερα καὶ ὕδατος ἔνδεια καὶ πληθους· φθείρει γὰρ καὶ τὸ στάσιμον ἐὰν ὑπεραίρη τὸ μέγεθος τοῦ δένδρου, καθάπερ ἐν ταῖς ἐπομβρίαις καὶ τοῖς λιμνουμένοις τόποις, ὃ καὶ περὶ Φενεδὸν ξυνέβαινεν· ὅπου δ' ἀπορροὴ γίνεται κἄν ἔχη βάθος διαφέρουσι μᾶλλον· βοηθεῖ γὰρ ἡ κίνησις καὶ τῷ ἱκανὸν αἰεὶ τὸ προσπίπτον εἶναι· τούτων μὲν οὖν ταύτας ὑποληπτέον τὰς αἰτίας.

[15.1] Λοιπὸν δ' ἐστὶν εἰπεῖν περὶ τε τῶν βιαίων παθῶν καὶ εἴ τις ἄλλη μὴ ὑπὸ τοῦ ἀέρος καὶ τῶν τῆς φύσεως ἄλλ' ὑφ' ἡμῶν γίνεται· καθάπερ ἢ τε διὰ τὸν περιφλοῖσμον καὶ διὰ τὴν ἔλκωσιν τῶν φυτῶν καὶ ὅσα παραβαλλόμενα παρὰ τὰς ρίζας αὐαίνει, καθάπερ τὰ τῶν κυάμων κελύφη καὶ εἴ τι ἄλλο τοιοῦτον ἕτερον. Καὶ πρῶτον ὑπὲρ τῶν κυάμων λέγωμεν· φθείρει γὰρ τὰ τῶν κυάμων κελύφη περιβαλλόμενα ταῖς ρίζαις καὶ τοῖς βλαστοῖς οὐ πάντα, ἀλλὰ τὰ ἄρτι ἀναφυόμενα, ταῦτα γὰρ ἀσθενέστερα· φθείρει δὲ ὅτι τῇ σκληρότητι καὶ τῇ ξηρότητι ἀφαιρεῖται τὴν τροφήν τὴν μὲν ἔλκοντα αὐτὰ, τὴν δ' ἀποστέγοντα· μὴ τρεφόμενα γὰρ φθίρεται.

[2] Καὶ ταῦτα καὶ εἴ τι τοιοῦτον ἕτερον ὥσπερ ἐναντία πρὸς τὴν βλάστησιν ὄντα φθείρει· ἔνια δὲ καὶ τῶν οἰκείων καὶ συνεργούντων, ἐὰν πλείω συνενεχθῇ τῶν συμμέτρων ἢ ἰσχυρότερα ἢ μὴ κατὰ καιρὸν οἶον ἢ κόπρος ἢ συνεχῶς ἢ πλείων ἢ ἰσχυροτέρα παραβαλλομένη καθάπερ ἡ σκυτοδεσπική· πάντα γὰρ ὡς εἰπεῖν αὕτη δοκεῖ φθίρειν ἄκρατος οὕσα ἢ μὴ καλῶς κραθεῖσα· καὶ ὅσαι δὲ θερμαὶ καὶ ξηραὶ καὶ ἰσχυραὶ τὸ ὅλον καὶ μὴ οἰκεῖται πρὸς ἕκαστον.

[3] Εἰσὶ γὰρ ὥσπερ εἵπομεν αἱ πρὸς τὰς φυτείας ἀρμόττουσαι καὶ οὐχ ὥσπερ τὸ ὕδωρ πᾶσι κοινόν· ἀλλὰ τοῦτο ἐνίοτε τῷ πλήθει διαφθείρει σῆπον τὰς ρίζας καὶ λίαν ἐκμεθύσκον· ἐὰν δὲ δὴ νέα τύχη καὶ μὴ ἄγαν ὄντα φύλδωρα καθάπερ ἢ κυπάριστος καὶ τᾶλλα τὰ ξηρὰ καὶ μᾶλλον. Καὶ ἐὰν δὴ τις μὴ κατὰ καιρὸν ἢ τούτοις ἢ τῇ διακαθάρσει ἢ τῇ σκαπάνῃ χρῆσθαι· πάντα γὰρ συναίτια γίνεται φθορᾶς· ὁ δὲ καιρὸς καὶ πρὸς αὐτὰ καὶ πρὸς τὰ ἐπιγινόμενα παρὰ τοῦ θεοῦ κατὰ τὰς ὥρας. Αὗται μὲν ἐν τοῖς οἰκείοις αἱ φθοραὶ δι' ὑπερβολὴν ἢ δι' ἔλλειψιν τροφῆς ἢ ἀκαιρίαν ἔργων.

[4] Αἱ δ' ἀπὸ τῶν παραφυτευομένων ἢ παραβλαστανόντων αὐτομάτων τῷ ἀφαιρεῖσθαι τὰς τροφὰς θᾶπτον δ' ἐὰν ἰσχυρότερα καὶ πλείω, καθάπερ τὰ ἄγρια καὶ ὅσα δὴ πολύρριζα καὶ πολύτροφα καὶ ἐπισχίζοντα καὶ περιπλεκόμενα καὶ καταπνίγοντα καὶ ἐμφυόμενα, καθάπερ ὁ κιττός. Ἐπεὶ καὶ

ή ιξία δοκεῖ καὶ ὅλως τὰ ἐμβλαστάνοντα φθεῖρειν· ὁ δὲ κύτισος καὶ τὸ ἄλιμον τῇ τε πολυτροφίᾳ καὶ τῇ ἄλμυρίδι τῇ περὶ αὐτά· ἰσχυρότερον δὲ τὸ ἄλιμον διὰ τὸ πλείω ἔχειν.

[5] Φθοραὶ δὲ καὶ ἄλλοις ὑπ' ἄλλων εἰσὶν ἴδια καθάπερ ἐν τοῖς ἐλάττοσιν· καὶ γὰρ ἡ ὀροβάγχη καλουμένη φθεῖρει τὸν ὄροβον τῷ περιπλέκεσθαι καὶ καταλαμβάνειν καὶ τὸ λειμόδωρον τὸ βούκερας εὐθύς τῇ ρίζῃ παραφυόμενον καὶ ἄλλα δ' ἄλλων. Καὶ ὅσα δὴ συγγενῶνται καθ' ἕκαστον σπέρμα οἷον αἶρα καὶ αἰγίλωψ καὶ πυροῖς καὶ κριθαῖς καὶ ἀπαρίνη φακοῖς καὶ ἕτερα δ' ἑτέροις· ἅπαντα δὲ τῷ τὰς τροφὰς ἀφαιρεῖσθαι τὰς τε ἐκ τῆς γῆς καὶ τὰς ἀπὸ τοῦ ἡλίου καὶ τοῦ ἀέρος. Καὶ τούτων μὲν σχεδὸν φανεραὶ τινες αἱ αἰτίαι.

[6] Ἡ δ' ὑπὸ τοῦ ἐλαίου καὶ τῆς πίττης καὶ τοῦ στέατος, - καὶ γὰρ ταῦτα φθεῖρει καὶ μάλιστα τὰ φυτὰ τὰ νέα· καὶ οὐκ ἐῷσιν ἄπτεσθαι καὶ περιπλέκουσιν, - ἐν ἐκείναις ἐστὶ δὲ ταῖς αἰτίαις, ὅτι θερμὰ καὶ λεπτὰ τὴν φύσιν ὄντα διαδύεται τε πόρρω καὶ πυκνοῖ καὶ ἐπικάει τὸν φλοιόν· σημεῖον δ' ὅτι σκληρύνεται καὶ ἀφίσταται· πονήσαντος δὲ καὶ ἀποσκληρυνθέντος καὶ τούτου καὶ τοῦ ἐντὸς οὐ δύναται διῆναι ἡ τροφή· τοῦ δ' ἐπικάειν καὶ διαδύεσθαι πόρρω κάκεῖνο σημεῖον· οἱ γὰρ ἡμεροῦντες τοῦ θέρους ἐπὶ τὰ ὑπολείμματα τῶν ριζῶν ἔλαιον ἢ πίτταν ἐπιχέουσιν ἢ τῷ στέατι ἀλείφουσιν, ἅπερ ὅλως ξηραίνουνσι καὶ μαλισθ' ἢ πίττα διὰ τὸ ἰσχυροτάτη εἶναι.

[16.1] Λοιπαὶ δὲ τῶν φθορῶν αἱ βίαιοι λεγόμεναι· αὗται δὲ γίνονται πληγῇ ἢ περιαιρέσει τινῶν ἢ κολούσει ἢ τὸ ὅλον ἀφαιρέσει. Ἐνια μὲν γὰρ ἐλκούμενα βαθύτερον ἀπόλλυται διὰ τὴν ξηρότητα καὶ ἀσθένειαν· ὁ δὲ φοῖνιξ καὶ τιτρωσκόμενος εἰς τὸν ἐγκέφαλον, ἐν τούτῳ γὰρ ἡ ζωὴ καὶ ἡ βλάστησις· ὅταν οὖν ἀναξηρανθῇ ἢ τὸ ὅλον ἀλλοιωθῇ, παρεισπεσόντος ἀέρος τε καὶ ἀλλοτρίου θερμοῦ διαφθείρεται καὶ διαφθειρόμενος διήησιν εἰς τὰ κάτω· τούτου μὲν οὖν καὶ ἰδία τις ἡ φύσις ὥστε καὶ ἐμφανὲς εἶναι τὸ κύριον τοῦ ζῆν.

[2] Ἐνια δ' οὐ πρὸς πληγὴν ἀπαθῇ μόνον, ἀλλὰ καὶ ξύλων ἐξαιρουμένων ἐκ τοῦ στελέχους οἷον ὅσα φύσει καὶ εὐβλαστῇ καὶ ὑγρὰ, καθάπερ πετελέα, πλάτανος, τὰ πολλὰ τῶν παρύδρων· ἡ δὲ πεύκη καὶ δαδοκοπομένη σώζεται· μέγα δὲ ταύτῃ καὶ ἡ λιπαρότης. Ἄπαντα δὲ ταῦτα καὶ τᾶλλα μέγεθος ἔχοντα ὑπομένει δι' ὃ καὶ ἐκσηπόμενα σώζεται καὶ ζῇ. Ἐπεὶ καὶ τὴν πεύκην γ' οὐ νέαν δαδουργοῦσι, ἀλλ' ὅταν ἐν ἀκμῇ καὶ πορρωτέρω γένηται· νέα γὰρ οὐκ ἔχει διὰ τὸ μὴ πέττειν μηδὲ συναθροίζειν τὸ ὑγρὸν ἀλλ' εἰς τὴν βλάστησιν καὶ τὸ μῆκος καταναλίσκειν· ἅμα γὰρ τῇ εἰς βάθος αὔξη καὶ ἡ τοιαύτη διάθεσις καὶ δύναμις ἔοικεν ἀκολουθεῖν.

[3] Ὅσα δὲ καὶ τετρωμένα καὶ κολαζόμενα βελτίω γίνεται καὶ καρπιμώτερα δῆλον καὶ ταῦθ' ὑπομένειν. Πληγὴν μὲν οὖν καὶ διαίρεσιν τὰ τοιαῦτα δέχεται· σχίσιν δὲ τοῦ στελέχους πρὸς τούτοις ἄμπελος καὶ συκὴ καὶ ῥόα καὶ μηλέα, τὰ δὲ ἄλλα ἀπόλλυται· ὅσα γὰρ αὖ πληγέντα καὶ σχισθέντα συμμύει πάλιν καὶ συμφύεται ταῦθ' ὥσπερ ὑγιασθέντα ζῆ καὶ οὐχ ὥσπερ ἐκεῖνα διεσχισμένα (μένει)· τῆς δ' ὑπομονῆς αἴτιον ἢ ὑγρότης καὶ ἢ φύσει μανότης· τροφὴν τε γὰρ ἱκανὴν λαμβάνουσι καὶ οὐκ ἀναξηραίνεται διὰ τὴν σχίσιν, ὑπὸ δὲ τοῦ ψύχους οὐδὲν πάσχουσιν.

[4] Εἰ δ' οὕτω δεῖ λαβεῖν τὴν σχίσιν ὥστε ἀνέχεσθαι μὲν ἃ μόνα δοκεῖ τῶν ἡμέρων τοῦτο δύνασθαι συκῆ, ἄμπελος, ἐλάα, ἀμυγδαλὴ διὰ τὸ συμμύειν τάχιστα ... δι' ὃ καὶ δύσχιστα τῷ κολλώδη τὴν ὑπόστασιν ἔχειν· καὶ γὰρ ὁ ὁπὸς καὶ τὸ τῆς ἐλάας τοιοῦτο καὶ πᾶν τὸ λιπαρὸν, τὸ δὲ τῆς ἀμπέλου ξύλον αὐτὸ τοιοῦτον· σημεῖον δὲ ὅτι καὶ σχιζόμενα τὰ κλήματα καὶ τῆς ἐντεριώνης ἐξαιρουμένης τάχα συμφύεται· καὶ τούτου γε μᾶλλον ὁ κάλαμος, καὶ γὰρ συνέρχεται αὐτόματος· φασὶ δὲ καὶ τὴν ἅπion σχίζεσθαι· περὶ μὲν οὖν τούτων σκεπτέον.

[17.1] Ἡ δὲ τοῦ φλοιοῦ περιαίρεσις κοινὴ πάντων ἢ τῶν πλείστων ἐστὶ φθορὰ, περὶ ἧς εἴρηται πρότερον. Εἴτε γὰρ ἐν τοῖς κυρίοις ἐστὶ τοῦ ζῆν εἴτε καὶ ἀπὸ τούτων πυκνουμένων διῴκνεῖται πρὸς τὸ ὅλον εὐλογον καὶ οὕτως. Ἡ δὲ μήτρα μέχρι μὲν τινος ἐξαιρουμένη οὐ φθείρει, δι' ὅλου δὲ φθείρει καθάπερ οἱ περὶ Ἀρκαδίαν φασὶ καὶ πεύκην καὶ ἐλάτην καὶ ἄλλ' ὅτι ἂν· οὐκ ἄλογος δ' οὐδὲ ταύτης ἢ αἰτία· καὶ ταῦτ' εἶη τῶν εἰρημένων· ὑγρότατον γὰρ δοκεῖ καὶ ὥσπερ μάλιστα εἶναι ζωτικόν.

[2] Σημεῖον δ' ὅτι καὶ τὰ ξύλα τὰ ἔμμητρα διαστρέφεται κατειργασμένα ἤδη μέχρι οὗ ἂν τελέως ἀναξηρανθῇ, δι' ὃ καὶ ἔνσχιστα καὶ οὐκ ἔμμητρα ποιοῦσι τὰ τῆς ἐλάτης καὶ τῆς πεύκης. Ταύτης δ' οὖν μέχρι μὲν τινος ἐξαιρουμένης οὐκ ἄτοπον διαμένειν τὸ δένδρον ὥσπερ καὶ τοῦ φλοιοῦ μέχρι τινὸς ἀφαιρουμένου, τελέως δ' ἐξαιρεθείσης αὐαίνεσθαι καθάπερ ἀρχῆς τινος ἢ καὶ οἰκείας ὑγρότητος συμφύτου στερούμενον.

[3] Περὶ δὲ τῆς ἐπικοπῆς καὶ τῆς κολούσεως ἐν ὀλίγοις ἢ σκέψις· ὀλίγα γὰρ τὰ φθειρόμενα κατὰ μὲν τὴν ἐπικοπὴν, ἐλάτη, πεύκη, πίτυς, φοῖνιξ, ἔνιοι δὲ καὶ κέδρον καὶ κυπάριστον φασιν· καλοῦσι δ' ἐπικοπὴν, ὅταν ἀφαιρεθείσης τῆς κόμης ἐπικόπη τις τὸ ἄκρον· οὐκ ἀλόγως δ' ἂν δόξειε φθεῖρεσθαι ξηρὰ τε τῇ φύσει καὶ εὐθυπορώτατα μὲν, μονόρριζα δ' ὄντα. Καὶ γὰρ αἱ ἐλκώσεις πόνον παρέχουσι καὶ εὐπαθέστερα ποιοῦσιν εἰς τὸ διῴκνεῖσθαι καὶ τὸ καῦμα

καὶ τὸ ψῦχος ἄλλως τε καὶ πανταχόθεν οὔσαι καὶ διὰ τὴν ὀρθότητα καὶ διὰ τὴν εὐθυπορίαν ταχὺ διῖκνεῖται καὶ πρὸς τὰς ρίζας, ὥστε πολλαχόθεν ἡ φθορά·

[4] φύσει δὲ ἀπαράβλαστα πάντα καὶ διὰ τὴν ξηρότητα τῶν ριζῶν καὶ διὰ τὴν εἰς τὸ ἄνω φοράν καὶ ἔτι τῇ μονόρριζα εἶναι καὶ τῇ βαθυτέρας ἔχειν. Οὐδαμοῦ γὰρ οὐδὲν περιττὸν οὐδὲ παροχετευόμενον ἐκπίπτει τῆς τροφῆς ὥστε μὴ εἶναι βλαστήσεως ἀρχήν· ὅταν οὖν πάντα ταῦθ' ὑπάρχη πᾶσι σχεδὸν ἀναγκαῖον τὴν φθορὰν εἶναι τελείαν·

[5] αἱ δὲ κολούσεις φθείρουσιν ὅλως ὀλίγα· μόνον γὰρ μάλιστα τὸ τῆς ἀμπέλου φυτὸν ἀπόλλυται καὶ εἴ τι ἕτερον ἀπαλὸν καὶ ἀσθενὲς καὶ εὐθύπορον· ταῦτα γὰρ αἷτια τοῖς τοιούτοις τῆς φθορᾶς· χεῖρω δὲ ποιοῦσι πλείω· καὶ γὰρ ἡ ἀμυγδαλὴ πικρὰ γίνεται καὶ ἡ ρόα σκληροτέρα καὶ ἕτερ' ἅττα μεταβάλλει· τὸ δ' αἷτιον εἴρηται πρότερον ὅτι τῆς ἀρχῆς ἀλλοιουμένης συναλλοιοῦται καὶ τὸ τέλος·

[6] χάλεπαί δὲ καὶ αἱ ἐπιβοσκήσεις ὅτι συνεπικάουσιν ἅμα τῇ τομῇ καὶ ἀφαιρέσει δι' ὃ καὶ ὁ πόνος πλείων. Ἴδιον δὲ τὸ περὶ τὸν φοῖνικα καὶ τὴν πίτυν· ὅταν γὰρ τι κολουσθῇ ταῦτ' οὐκ ἀπόλλυται μὲν, ἄκαρπα δὲ γίνεται· τὴν δ' αἷτιαν παραπλησίαν ὑποληπτέον εἶναι τοῖς πρότερον ὅτι τῆς ἀρχῆς ἀλλοιουμένης καὶ ἀσθενεστέρας γινομένης ἀφαιρεῖται (τι) τῆς δυνάμεως καὶ μάλιστα τὸ ἔσχατον καὶ τελεώτατον ὁ καρπός. Ἄμα δὲ καὶ ἡ μὲν βλάστησις ὑπάρχει καὶ ὥσπερ ἤδη γέγονεν, ἐκεῖνον δὲ δεῖ γίνεσθαι· τὸ δ' ἐν γενέσει καὶ μέλλον εἶναι τοῦ ὄντος ἀσθενέστερον· ἐπὶ τούτων δὲ μάλιστ' ἢ μόνων ὅτι ὀλιγόκαρπα καὶ βραδύκαρπα κατὰ γε τὴν παρ' ἡμῖν φυτεῖαν· ἐν δὲ ταῖς οἰκείαις χώραις ἴσως οὐκ ἀκαρπεῖ οὐδὲ θαυμαστὸν εἰ μὴ ἀκαρπεῖ ταῦτ' ἐκεῖ κολουόμενα.

[7] Τὰ δὲ τῆς ἀρχῆς ὅτι μεγάλα πολλαχόθεν μὲν φανερόν· εἰ δὲ μὴ καὶ ἐκ τῶν βλαστήσεων ὅταν κακωθῶσιν ἐν ἄλλοις τε καὶ οὐχ ἥκιστα ἐν τῇ ἀμπέλῳ· κατεδεσθεῖσα γὰρ ὑπὸ τῶν κτηνῶν οὐκέτι δύναται βλαστάνειν, ἀλλ' αὐτὴ ἡ τῆς βλαστήσεως ἐπιρροὴ παύεται καὶ ἀποσβέννυται, ᾧ φαίνεται ὥσπερ τυφλουμένη καὶ πηρουμένη πῶς· ἰσχυρὸν δὲ ἐν ἅπασιν ἡ ἀρχὴ καὶ ἀσθενὲς οὐ τὸν αὐτὸν δὲ τρόπον· ἐπεὶ ὅτι γε βλαστητικὸν ἅμπελος καὶ αἱ εἰς τὸν ὕστερον χρόνον ἐπιβλαστήσεις μηνύουσιν.

[18.1] Φθοραὶ δὲ καὶ τῶν σπερμάτων εἰσὶ τινες τῶν μὴ κατὰ φύσιν σπειρομένων ὁμοίως τῶν τε δενδρικῶν καὶ τῶν σιτηρῶν καὶ τῶν ἄλλων, ὧν καὶ χρόνοι τινές εἰσιν ὠρισμένοι· πάντα γὰρ ζῆ μέχρι τινὸς εἴτ' ἀπόλλυται·

ζῆν δὲ λέγω δυνάμει· φθείρονται δὲ φυσικῶς ἀποξηραίνόμενα καὶ ὥσπερ διαπνεύσης ἅμα τῆς θερμότητος καὶ ὑγρότητος· αἱ δὲ ἄλλαι πᾶσαι παρὰ φύσιν οἷον ὅσα θηριοῦνται καὶ ἀνυγραίνεται καὶ ἄλλως πως ἐξίσταται·

[2] δι' ὃ καὶ τὰ μὲν πολύλοπα καὶ πολυχίτωνα καὶ λιπαρὰ καὶ δριμέα καὶ πικρὰ καὶ ὀστώδη καὶ ξηρὰ πάντα πολυχρόνια· τὰ δ' ἄλλα ταχὺ ἐξίσταται· τὰ μὲν γὰρ ὑπ' ἀλλήλων θερμαινόμενα καθάπερ ὁ σῖτος καὶ τὰ χεδροπὰ, τὰ δ' ὑπὸ τοῦ ἀέρος καὶ τῶν ἐξωθεν ὑγραίνόμενα καθάπερ τὰ τῶν λαχάνων καὶ τῶν στεφανωμάτων· οἷον γὰρ μαδᾷ καὶ εἰς διαβλάστησιν ὀρμᾶται· ζωοῦται δὲ θάπτον καὶ φθείρεται τῶν χεδροπῶν τὰ τεράμονα· γλυκύτερα γὰρ ἐν τούτῳ δὲ ἢ ζωοποιΐα· καὶ ἅμα θάπτον ἐξίσταται δι' ἀσθeneiάν τε καὶ διὰ τὸ ὥσπερ ἐν πέρατι εἶναι· καὶ τοῦ σίτου δὲ ὡσαύτως ὁ γλυκύτερος.

[3] Μέγα δ' οἱ τόποι διαφέρουσιν εἰς φυλακὴν ἐὰν ὧσι ξηροὶ καὶ ψυχροί. Διαμένουσι γὰρ πλείω χρόνον ὥσπερ ἐν τε Μηδεΐᾳ καὶ Παφλαγονίᾳ καὶ τούτων ἐν τοῖς ὑψηλοτάτοις χωρίοις ὡσαύτως δὲ καὶ εἶπου ἄλλοθι τοιοῦτον· ἀμφοτέρα γὰρ ἐξείργονται τὰ διαφθείροντα τό τε θερμὸν καὶ τὸ ὑγρὸν· ἐπεὶ καὶ ἡ διαπαττομένη γῆ τοῦτο ποιεῖ, ξηραίνει τε καὶ ψύχει.

[4] Τῶν δὲ δενδρικῶν ὅσα μὲν μαλακὰ καὶ σαρκώδη καθάπερ ἡ ἀμυγδαλὴ καὶ τὸ κάρυον καὶ ἡ βάλανος τοῖς περιέχουσι σώζεται, τὰ δὲ ξηρὰ καὶ ξυλώδη καθάπερ τὸ γίγαρτον καὶ τὰ τοιαῦτα καὶ ἑαυτοῖς. Ὡς δ' ἀπλῶς εἰπεῖν πάντα πολυχρονιώτερα διὰ τὸ περιέχον· ἐπεὶ καὶ τὸ γίγαρτον καὶ ἡ κεγχραμὶς καὶ τὰ ἄλλα τὰ τοιαῦτα πολλῷ μᾶλλον ἀποξηραίνεται γυμνούμενα. Μάλιστα δὲ διαμένει τῶν τοιούτων ὅσα πυρῇ περιέχεται, καθάπερ τὸ τῆς ἐλάας καὶ εἴ τι ξυλῶδες ἢ ὀστώδες τυγχάνει, καθάπερ τὸ τοῦ φοίνικος καὶ ὁ κνήκος καὶ τᾶλλα τὰ κνηκώδη. πυκνὰ γὰρ πάντα καὶ προβολὴν ἔχοντα· τὸ δὲ σπέρμα τὸ ἐντος ὅτε μὲν κεχωρισμένον τι καὶ φανερόν, ὅτε δὲ ἀχώριστον καὶ ἀφανὲς, ὥσπερ τὸ τῶν φοινίκων.

De sensu et sensibilibus

ΘΕΟΦΡΑΣΤΟΥ ΠΕΡΙ ΑΙΣΘΗΣΕΩΝ

[1] Περὶ δ' αἰσθήσεως αἱ μὲν πολλαὶ καὶ καθόλου δόξαι δύο εἰσὶν· οἱ μὲν γὰρ τῷ ὁμοίῳ ποιοῦσιν, οἱ δὲ τῷ ἐναντίῳ. Παρμενίδης μὲν καὶ Ἐμπεδοκλῆς καὶ Πλάτων τῷ ὁμοίῳ, οἱ δὲ περὶ Ἀναξαγόραν καὶ Ἡράκλειτον τῷ ἐναντίῳ. τὸ δὲ πιθανὸν ἔλαβον οἱ μὲν ὅτι τῶν ἄλλων τε τὰ πλεῖστα τῇ ὁμοιότητι θεωρεῖται καὶ ὅτι σύμφυτόν ἐστι πᾶσι τοῖς ζώοις τὰ συγγενῇ γνωρίζειν, ἔτι δ' ὥς τὸ μὲν αἰσθάνεσθαι τῇ ἀπορροίᾳ γίνεται, τὸ δ' ὅμοιον φέρεται πρὸς τὸ ὅμοιον.

[2] οἱ δὲ τὴν αἴσθησιν ὑπολαμβάνοντες ἐν ἀλλοιώσει γίνεσθαι καὶ τὸ μὲν ὅμοιον ἀπαθὲς ὑπὸ τοῦ ὁμοίου, τὸ δ' ἐναντίον παθητικόν, τούτῳ προσέθεσαν τὴν γνώμην· ἐπιμαρτυρεῖν δὲ οἴονται καὶ τὸ περὶ τὴν ἀφὴν συμβαῖνον· τὸ γὰρ ὁμοίως τῇ σαρκὶ θερμὸν ἢ ψυχρὸν οὐ ποιεῖν αἴσθησιν. καθόλου μὲν οὖν περὶ αἰσθήσεως αὗται παραδέδονται δόξαι. περὶ ἐκάστης δὲ τῶν κατὰ μέρος οἱ μὲν ἄλλοι σχεδὸν ἀπολείπουσιν, Ἐμπεδοκλῆς δὲ πειρᾶται καὶ ταύτας ἀνάγειν εἰς τὴν ὁμοιότητα. [παρμενίδου]

[3] Παρμενίδης μὲν γὰρ ὅλως οὐδὲν ἀφώρικεν ἀλλὰ μόνον ὅτι δυοῖν ὄντοιν στοιχείοι κατὰ τὸ ὑπερβάλλον ἐστὶν ἡ γνῶσις. ἐὰν γὰρ ὑπεραίρη τὸ θερμὸν ἢ τὸ ψυχρὸν, ἄλλην γίνεσθαι τὴν διάνοιαν, βελτίῳ δὲ καὶ καθαρωτέραν τὴν διὰ τὸ θερμόν· οὐ μὴν ἀλλὰ καὶ ταύτην δεῖσθαι τινος συμμετρίας·

ὥς γὰρ ἐκάστοτε - φησὶν - ἔχει κρᾶσιν μελέων πολυπλάγκτων,
τὼς νόος ἀνθρώποισι παρέστηκεν· τὸ γὰρ αὐτὸ
ἔστιν ὅπερ φρονέει μελέων φύσις ἀνθρώποισι
καὶ πᾶσιν καὶ παντί· τὸ γὰρ πλεόν ἐστὶ νόημα.

[4] τὸ γὰρ αἰσθάνεσθαι καὶ τὸ φρονεῖν ὥς ταῦτ' ἀλέγει, διὸ καὶ τὴν μνήμην καὶ τὴν λήθην ἀπὸ τούτων γίνεσθαι διὰ τῆς κράσεως· ἂν δ' ἰσάζωσι τῇ μίξει, πότερον ἔσται φρονεῖν ἢ οὐ, καὶ τίς ἢ διάθεσις, οὐδὲν ἔτι διώρικεν. ὅτι δὲ καὶ τῷ ἐναντίῳ καθ' αὐτὸ ποιεῖ τὴν αἴσθησιν φανερόν, ἐν οἷς φησι τὸν νεκρὸν φωτὸς μὲν καὶ θερμοῦ καὶ φωνῆς οὐκ αἰσθάνεσθαι διὰ τὴν ἔκλειψιν τοῦ πυρός, ψυχροῦ δὲ καὶ σιωπῆς καὶ τῶν ἐναντίων αἰσθάνεσθαι, καὶ ὅλως δὲ πᾶν τὸ ὄν ἔχειν τινὰ γνῶσιν. οὕτω μὲν οὖν αὐτὸς εἴκειν ἀποτέμενεσθαι τῇ φάσει τὰ συμβαίνοντα δυσχερῇ διὰ τὴν ὑπόληψιν.

[5] Πλάτων δὲ ἐπὶ πλεόν μὲν ἦπται τῶν κατὰ μέρος, οὐ μὴν εἰρηκέ γε περὶ ἀπασῶν, ἀλλὰ μόνον περὶ ἀκοῆς καὶ ὄψεως. καὶ τὴν μὲν ὄψιν ποιεῖ πυρός (διὸ

καὶ τὸ χρῶμα φλόγα τιν' ἀπὸ τῶν σωμάτων σύμμετρα μόρια τῇ ὧψι ἔχουσιν), ὡς ἀπορροῆς τε γινομένης καὶ δέον συναρμόττειν ἀλλήλοις ἐξιούσαν μέχρι τινὸς συμφύεσθαι τῇ ἀπορροῇ καὶ οὕτως ὁρᾶν ἡμᾶς· ὥσπερ ἂν εἰς τὸ μέσον τιθεῖς τὴν ἑαυτοῦ δόξαν τῶν τε φασκόντων προσπίπτειν τὴν ὧσιν καὶ τῶν φέρεσθαι πρὸς αὐτὴν ἀπὸ τῶν ὁρατῶν.

[6] ἀκοὴν δὲ διὰ τῆς φωνῆς ὀρίζεται· φωνὴν γὰρ εἶναι πληγὴν ὑπ' ἀέρος ἐγκεφάλου καὶ αἵματος δι' ὧτων μέχρι ψυχῆς, τὴν δ' ὑπὸ ταύτης κίνησιν ἀπὸ κεφαλῆς μέχρι ἥπατος ἀκοήν. περὶ δὲ ὁσφρήσεως καὶ γεύσεως καὶ ἀφῆς ὅλως οὐδὲν εἴρηκεν, οὐδὲ εἰ παρὰ ταύτας ἄλλαι τινές εἰσιν, ἀλλὰ μᾶλλον ἀκριβολογεῖται περὶ τῶν αἰσθητῶν.

[7] Ἐμπεδοκλῆς δὲ περὶ ἀπασῶν ὁμοίως λέγει καὶ φησι τῷ ἐναρμόττειν εἰς τοὺς πόρους τοὺς ἐκάστης αἰσθάνεσθαι· διὸ καὶ οὐ δύνασθαι τὰ ἀλλήλων κρίνειν, ὅτι τῶν μὲν εὐρύτεροί πως, τῶν δὲ στενότεροι τυγχάνουσιν οἱ πόροι πρὸς τὸ αἰσθητόν, ὡς τὰ μὲν οὐχ ἀπτόμενα διευτονεῖν, τὰ δ' ὅλως εἰσελθεῖν οὐ δύνασθαι. πειρᾶται δὲ καὶ τὴν ὧσιν λέγειν, ποία τίς ἐστὶ· καὶ φησὶ τὸ μὲν ἐντὸς αὐτῆς εἶναι πῦρ «καὶ ὕδωρ», τὸ δὲ περὶ αὐτὸ γῆν καὶ ἀέρα, δι' ὧν διέναι λεπτὸν ὃν καθάπερ τὸ ἐν τοῖς λαμπτήρσι φῶς. τοὺς δὲ πόρους ἐναλλάξ κεῖσθαι τοῦ τε πυρὸς καὶ τοῦ ὕδατος, ὧν τοῖς μὲν τοῦ πυρὸς τὰ λευκά, τοῖς δὲ τοῦ ὕδατος τὰ μέλανα γνωρίζειν· ἐναρμόττειν γὰρ ἑκατέροις ἑκάτερα. φέρεσθαι δὲ τὰ χρώματα πρὸς τὴν ὧσιν διὰ τὴν ἀπορροήν.

[8] συγκεῖσθαι δ' οὐχ ὁμοίως, τὰς δ' ἐκ τῶν ἀντικειμένων, καὶ ταῖς μὲν ἐν μέσῳ, ταῖς δ' ἐκτὸς εἶναι τὸ πῦρ, διὸ καὶ τῶν ζώων τὰ μὲν ἐν ἡμέρᾳ, τὰ δὲ νύκτωρ μᾶλλον ὀξυωπεῖν· ὅσα μὲν πυρὸς ἔλαττον ἔχει μεθ' ἡμέραν· ἐπανισοῦσθαι γὰρ αὐτοῖς τὸ ἐντὸς φῶς ὑπὸ τοῦ ἐκτός· ὅσα δὲ τοῦ ἐναντίου νύκτωρ· ἐπαναπληροῦσθαι γὰρ καὶ τούτοις τὸ ἐνδεές. ἐν δὲ τοῖς ἐναντίοις «ἐναντίως» ἑκάτερον· ἀμβλυωπεῖν μὲν γὰρ καὶ οἷς ὑπερέχει τὸ πῦρ, ἐπεὶ αὐξηθὲν ἔτι μεθ' ἡμέραν ἐπιπλάττειν καὶ καταλαμβάνειν τοὺς τοῦ ὕδατος πόρους· οἷς δὲ τὸ ὕδωρ, ταῦτο τοῦτο γίνεσθαι νύκτωρ· καταλαμβάνεσθαι γὰρ τὸ πῦρ ὑπὸ τοῦ ὕδατος. ἕως ἂν τοῖς μὲν ὑπὸ τοῦ ἔξωθεν φωτὸς ἀποκριθῇ τὸ ὕδωρ, τοῖς δ' ὑπὸ τοῦ ἀέρος τὸ πῦρ· ἑκατέρων γὰρ ἴασι εἶναι τὸ ἐναντίον. ἄριστα δὲ κεκρᾶσθαι καὶ βελτίστην εἶναι τὴν ἐξ ἀμφοῖν ἴσων συγκεῖμένην. καὶ περὶ μὲν ὧσεως σχεδὸν ταῦτα λέγει.

[9] τὴν δ' ἀκοὴν ἀπὸ τῶν ἔξωθεν γίνεσθαι ψόφων. ὅταν γὰρ ὑπὸ τῆς φωνῆς κινηθῇ, ἡχεῖν ἐντός· ὥσπερ γὰρ εἶναι κώδωνα ἱτῶν ἴσων ἡχων τὴν ἀκοὴν ἣν προσαγορεύει σάρκινον ἱόζον· κινουμένην δὲ παίειν τὸν ἀέρα πρὸς τὰ στερεὰ

καὶ ποιεῖν ἦχον. ὁσφρησιν δὲ γίνεσθαι τῇ ἀναπνοῇ· διὸ καὶ μάλιστα ὁσφραίνεσθαι τούτους, οἷς σφοδροτάτῃ τοῦ ἁσθματος ἡ κίνησις· ὁσμήν δὲ πλείστην ἀπὸ τῶν λεπτῶν καὶ τῶν κούφων ἀπορρεῖν. περὶ δὲ γεύσεως καὶ ἀφῆς οὐ διορίζεται καθ' ἑκατέραν οὔτε πῶς οὔτε δι' ἃ γίνονται, πλὴν τὸ κοινὸν ὅτι τῷ ἐναρμόττειν τοῖς πόροις αἰσθησίς ἐστιν· ἥδεσθαι δὲ τοῖς ὁμοίοις κατὰ τε ἡμόρια καὶ τὴν κρᾶσιν, λυπεῖσθαι δὲ τοῖς ἐναντίοις.

[10] ὡσαύτως δὲ λέγει καὶ περὶ φρονήσεως καὶ ἀγνοίας. τὸ μὲν γὰρ φρονεῖν εἶναι τοῖς ὁμοίοις, τὸ δ' ἀγνοεῖν τοῖς ἀνομοίοις, ὥς ἡ ταῦτόν ἢ παραπλήσιον ὄν τῇ αἰσθήσει τὴν φρόνησιν. διαριθμησάμενος γὰρ ὥς ἕκαστον ἐκάστω γγνωρίζομεν ἐπὶ τέλει προσέθηκεν ὥς

ἐκ τούτων <γὰρ> πάντα πεπήγασιν ἀρμοσθέντα

καὶ τούτοις φρονέουσι καὶ ἡδονὴν ἢ ἀνιῶνται.

διὸ καὶ τῷ αἵματι μάλιστα φρονεῖν· ἐν τούτῳ γὰρ μάλιστα κεκρᾶσθαι ἔστι τὰ στοιχεῖα τῶν μερῶν.

[11] ὅσοις μὲν οὖν ἴσα καὶ παραπλήσια μέμικται καὶ μὴ διὰ πολλοῦ μὴδ' αὖ μικρὰ μὴδ' ὑπερβάλλοντα τῷ μεγέθει, τούτους φρονιμωτάτους εἶναι καὶ κατὰ τὰς αἰσθήσεις ἀκριβεστάτους, κατὰ λόγον δὲ καὶ τοὺς ἐγγυτάτω τούτων, ὅσοις δ' ἐναντίως, ἀφρονεστάτους. καὶ ὧν μὲν μανὰ καὶ ἀραιὰ κεῖται τὰ στοιχεῖα, νωθροὺς καὶ ἐπιπόνους· ὧν δὲ πυκνὰ καὶ κατὰ μικρὰ τεθραυσμένα, τοὺς δὲ τοιούτους ὀξέως φερομένους καὶ πολλοῖς ἐπιβαλλομένους ὀλίγα ἐπιτελεῖν διὰ τὴν ὀξύτητα τῆς τοῦ αἵματος φορᾶς. οἷς δὲ καθ' ἓν τι μόριον ἢ μέση κρᾶσις ἐστι, ταύτῃ σοφοὺς ἐκάστους εἶναι· διὸ τοὺς μὲν ῥήτορας ἀγαθοὺς, τοὺς δὲ τεχνίτας, ὥς τοῖς μὲν ἐν ταῖς χερσί, τοῖς δὲ ἐν τῇ γλώττῃ τὴν κρᾶσιν οὔσαν· ὁμοίως δ' ἔχειν καὶ κατὰ τὰς ἄλλας δυνάμεις.

[12] Ἐμπεδοκλῆς μὲν οὖν οὕτως οἶεται καὶ τὴν αἰσθησιν γίνεσθαι καὶ τὸ φρονεῖν. ἀπορήσειε δ' ἂν τις ἐξ ὧν λέγει πρῶτον μὲν, τί διοίσει τὰ ἔμψυχα πρὸς τὸ αἰσθάνεσθαι τῶν ἄλλων. ἐναρμόττει γὰρ καὶ τοῖς τῶν ἀψύχων πόροις· ὅλως γὰρ ποιεῖ τὴν μῖξιν τῇ συμμετρίᾳ τῶν πόρων· διόπερ ἔλαιον μὲν καὶ ὕδωρ οὐ μίγνυσθαι, τὰ δὲ ἄλλα ὑγρά καὶ περὶ ὅσων δὴ καταριθμεῖται τὰς ἰδίας κράσεις. ὥστε πάντα τε αἰσθήσεται καὶ ταὐτὸ ἔσται μῖξις καὶ αἰσθησις καὶ αὐξήσις· πάντα γὰρ ποιεῖ τῇ συμμετρίᾳ τῶν πόρων, ἐὰν μὴ προσθῇ τινα διαφορὰν.

[13] ἔπειτα ἐν αὐτοῖς τοῖς ἐμψύχοις τί μᾶλλον αἰσθήσεται τὸ ἐν τῷ ζῳῳ πῦρ ἢ τὸ ἐκτός, εἴπερ ἐναρμόττουσιν ἀλλήλοις· ὑπάρχει γὰρ καὶ ἡ συμμετρία καὶ τὸ ὅμοιον. ἔτι δὲ ἀνάγκη διαφορὰν τινα ἔχειν, εἴπερ αὐτὸ μὲν μὴ δύναται

συμπληροῦν τοὺς πόρους, τὸ δ' ἔξωθεν ἐπεισιόν· ὥστ' εἰ ὅμοιον ἦν πάντῃ καὶ πάντως, οὐκ ἂν ἦν αἰσθησις. ἔτι δὲ πότερον οἱ πόροι κενοὶ ἢ πλήρεις; εἰ μὲν γὰρ κενοί, συμβαίνει διαφωνεῖν ἑαυτῷ, φησὶ γὰρ ὅλως οὐκ εἶναι κενόν· εἰ δὲ πλήρεις, αἰεὶ ἂν αἰσθάνοιτο τὰ ζῶα· δηλὸν γὰρ ὡς ἐναρμόττει, καθάπερ φησί, τὸ ὅμοιον.

[14] καίτοι κἂν αὐτὸ τοῦτό τις διαπορήσειεν, εἰ δυνατόν ἐστι τηλικαῦτα μεγέθη γενέσθαι τῶν ἑτερογενῶν, ὥστ' ἐναρμόττειν, ἄλλως τε κἂν συμβαίνει, καθάπερ φησί, τὰς ὄψεις ὧν ἀσύμμετρος ἡ κρᾶσις ὅτε μὲν ὑπὸ τοῦ πυρός, ὅτε δὲ ὑπὸ τοῦ ἀέρος ἐμπλαττομένων τῶν πόρων ἀμαυροῦσθαι. εἰ δ' οὐν ἐστι καὶ τούτων συμμετρία καὶ πλήρεις οἱ πόροι τῶν μὴ συγγενῶν, πῶς, ὅταν αἰσθάνηται, καὶ ποῦ ταῦτα ὑπεξέρχεται; δεῖ γάρ τινα ἀποδοῦναι μεταβολήν. ὥστε πάντως ἔχει δυσκολίαν· ἢ γὰρ κενὸν ἀνάγκη ποιεῖν, ἢ αἰεὶ τὰ ζῶα αἰσθάνεσθαι πάντων, ἢ τὸ μὴ συγγενὲς ἀρμόττειν οὐ ποιοῦν αἴσθησιν οὐδ' ἔχον μεταβολὴν οἰκείαν τοῖς ἐμποιοῦσιν.

[15] ἔτι δὲ εἰ καὶ μὴ ἐναρμόττοι τὸ ὅμοιον, ἀλλὰ μόνον ἄπτοιο, καθ' ὅτι οὐκ εὐλογον αἴσθησιν γίνεσθαι· δυοῖν γὰρ τούτοις ἀποδίδωσι τὴν γνῶσιν τῷ τε ὁμοίῳ καὶ τῇ ἀφῇ, διὸ καὶ τὸ 'ἀρμόττειν' εἴρηκεν· ὥστ' εἰ τὸ ἔλαττον ἄψαιτο τῶν μειζόνων, εἴη ἂν αἴσθησις. ὅλως τε κατὰ γε ἐκεῖνον ἀφαιρεῖται καὶ τὸ ὅμοιον, ἀλλὰ ἡ συμμετρία μόνον ἰκανόν. διὰ τοῦτο γὰρ οὐκ αἰσθάνεσθαι φησιν ἀλλήλων, ὅτι τοὺς πόρους ἀσυμμέτρους ἔχουσιν· εἰ δ' ὅμοιον ἢ ἀνόμοιον τὸ ἀπορρέον, οὐδὲν ἔτι προσαφώρισε. ὥστε ἢ οὐ τῷ ὁμοίῳ ἢ αἴσθησις ἢ οὐ διὰ τινα ἀσυμμετρίαν οὐ κρίνουσιν, ἀπάσας <τ'> ἀνάγκη τὰς αἰσθήσεις καὶ πάντα τὰ αἰσθητὰ τὴν αὐτὴν ἔχειν φύσιν.

[16] ἀλλὰ μὴν οὐδὲ τὴν ἡδονὴν καὶ λύπην ὁμολογουμένως ἀποδίδωσιν ἡδεσθαι μὲν ποιῶν τοῖς ὁμοίοις, λυπεῖσθαι δὲ τοῖς ἐναντίοις· 'ἐχθρὰ' γὰρ εἶναι, διότι

'πλεῖστον ἅπ' ἀλλήλων διέχουσι ...

γέννη τε κράσει <τε> καὶ εἶδεσιν ἐκμακτοῖσιν.'

αἰσθήσεις γὰρ τινὰς ἢ μετ' αἰσθήσεως ποιοῦσι τὴν ἡδονὴν καὶ τὴν λύπην, ὥστε οὐχ ἅπασι γίνεται τοῖς ὁμοίοις. ἔτι εἰ τὰ συγγενῇ μάλιστα ποιεῖ τὴν ἡδονὴν ἐν τῇ ἀφῇ, καθάπερ φησί, τὰ σύμφυτα μάλιστα· ἂν ἡδοιτο καὶ ὅλως αἰσθάνοιτο· διὰ τῶν αὐτῶν γὰρ ποιεῖ τὴν αἴσθησιν καὶ τὴν ἡδονήν.

[17] καίτοι πολλάκις αἰσθανόμενοι λυπούμεθα κατ' αὐτὴν τὴν αἴσθησιν, ὡς <δ'> Ἀναξαγόρας φησίν, αἰεὶ· πᾶσαν γὰρ αἴσθησιν εἶναι μετὰ λύπης. ἔτι δ' ἐν ταῖς κατὰ μέρος· συμβαίνει γὰρ τῷ ὁμοίῳ γίνεσθαι τὴν γνῶσιν· τὴν γὰρ ὅσιν

ὅταν ἐκ πυρὸς καὶ τοῦ ἐναντίου συστήσῃ, τὸ μὲν λευκὸν καὶ τὸ μέλαν δύναται ἂν τοῖς ὁμοίοις γνωρίζειν, τὸ δὲ φαιὸν καὶ τὰλλα χρώματα τὰ μικτὰ πῶς; οὔτε γὰρ τοῖς τοῦ πυρὸς οὔτε τοῖς τοῦ ὕδατος πόροις οὔτ' ἄλλοις ποιεῖ κοινοῖς ἐξ ἀμφοῖν· ὁρῶμεν δ' οὐδὲν ἦττον ταῦτα τῶν ἀπλῶν.

[18] ἀτόπως δὲ καὶ ὅτι τὰ μὲν ἡμέρας, τὰ δὲ νύκτωρ μᾶλλον ὁρᾷ· τὸ γὰρ ἔλαττον πῦρ ὑπὸ τοῦ πλείονος φθείρεται, διὸ καὶ πρὸς τὸν ἥλιον καὶ ὅλως τὸ καθαρὸν οὐ δυνάμεθ' ἀντιβλέπειν. ὥστε ὅσοις ἐνδεέστερον τὸ φῶς, ἦττον ἐχρῆν ὁρᾶν μεθ' ἡμέραν· ἢ εἴπερ τὸ ὅμοιον συναύξει, καθάπερ φησί, τὸ δὲ ἐναντίον φθείρει καὶ κωλύει, τὰ μὲν λευκὰ μᾶλλον ἐχρῆν ὁρᾶν ἅπαντας μεθ' ἡμέραν καὶ ὅσοις ἔλαττον καὶ ὅσοις πλεῖον τὸ φῶς, τὰ δὲ μέλανα νύκτωρ. νῦν δὲ πάντες ἅπαντα μεθ' ἡμέραν μᾶλλον ὁρῶσι πλὴν ὀλίγων ζώων· τούτοις δ' εὐλογον τοῦτ' ἰσχύειν τὸ οἰκεῖον πῦρ, ὥσπερ ἓνα καὶ τῇ χρῶα διαλάμπει μᾶλλον τῆς νυκτός.

[19] ἔτι δ' οἷς ἡ κρᾶσις ἐξ ἴσων, ἀνάγκη συναύξεσθαι κατὰ μέρος ἐκάτερον· ὥστ' εἰ πλεονάζον κωλύει θάτερον ὁρᾶν, ἀπάντων ἂν εἴη παραπλησία πως ἡ διάθεσις. ἀλλὰ τὰ μὲν τῆς ὀψεως πάθη χαλεπώτερον ἔσται διελεῖν. τὰ δὲ περὶ τὰς ἄλλας αἰσθήσεις πῶς κρίνωμεν τῷ ὁμοίῳ; τὸ γὰρ ὅμοιον ἀόριστον. οὔτε γὰρ ψόφῳ τὸν ψόφον οὔτ' ὁσμῇ τὴν ὁσμὴν οὔτε τοῖς ἄλλοις τοῖς ὁμογενέσιν, ἀλλὰ μᾶλλον ὥς εἰπεῖν τοῖς ἐναντίοις. ἀπαθὴ γὰρ δεῖ τὴν αἴσθησιν προσάγειν· ἡχοῦ δὲ ἐνόητος ἐν ὧσιν ἢ χυλῶν ἐν γεύσει καὶ ὁσμῆς ἐν ὁσφρήσει κωφότεραι πᾶσαι γίνονται· καὶ μᾶλλον ὅσῳ ἂν πλήρεις ᾖσι τῶν ὁμοίων, εἰ μὴ τις λεχθεῖη περὶ τούτων διορισμός.

[20] ἔτι δὲ τὸ περὶ τὴν ἀπορροήν, καίπερ οὐχ ἱκανῶς λεγόμενον περὶ μὲν τὰς ἄλλας ὁμῶς ἔστι πως ὑπολαβεῖν, περὶ δὲ τὴν ἀφὴν καὶ γεῦσιν οὐ ῥάδιον. πῶς γὰρ τῇ ἀπορροῇ κρίνωμεν ἢ πῶς ἐναρμόττον τοῖς πόροις τὸ τραχὺ καὶ τὸ λειόν; μόνου γὰρ δοκεῖ τῶν στοιχείων τοῦ πυρὸς ἀπορρεῖν, ἀπὸ δὲ τῶν ἄλλων οὐδενός. ἔτι δ' εἰ ἡ φθίσις διὰ τὴν ἀπορροήν, ὥπερ χρῆται κοινοτάτῳ σημείῳ, συμβαίνει δὲ καὶ τὰς ὁσμάς ἀπορροῇ γίνεσθαι, τὰ πλείστην ἔχοντα ὁσμὴν τάχιστ' ἐχρῆν φθείρεσθαι. νῦν δὲ σχεδὸν ἐναντίως ἔχει· τὰ γὰρ ὁσμοδέστατα τῶν φυτῶν καὶ τῶν ἄλλων ἐστὶ χρονιώτατα. συμβαίνει δὲ καὶ ἐπὶ τῆς φιλίας ὅλως μὴ εἶναι αἴσθησιν ἢ ἦττον διὰ τὸ συγκρίνεσθαι τότε καὶ μὴ ἀπορρεῖν.

[21] ἀλλὰ περὶ μὲν τὴν ἀκοήν ὅταν ἀποδῷ τοῖς ἔσωθεν γίνεσθαι ψόφοις, ἄτοπον τὸ οἶεσθαι δῆλον εἶναι πῶς ἀκούουσιν, ἔνδον ποιήσαντα ψόφον ὥσπερ κώδωνος. τῶν μὲν γὰρ ἔξω δι' ἐκεῖνον ἀκούομεν, ἐκείνου δὲ ψοφοῦντος διὰ τί; τοῦτο γὰρ αὐτὸ λείπεται ζητεῖν. ἀτόπως δὲ καὶ τὸ περὶ τὴν

ὁσφρησιν εἶρηκεν. πρῶτον μὲν γὰρ οὐ κοινήν αἰτίαν ἀπέδωκεν· ἓνα μὲν γὰρ ὅλως οὐδ' ἀναπνέει τῶν ὁσφραινομένων. ἔπειτα τὸ μάλιστα ὁσφραίνεσθαι τοὺς πλεῖστον ἐπισπωμένους εὐηθες· οὐδὲν γὰρ ὄφελος μὴ ὑγιαίνουσιν ἢ μὴ ἀνεωγμένης πῶς τῆς αἰσθήσεως. πολλοῖς δὲ συμβαίνει πεπηρῶσθαι καὶ ὅλως μηδὲν αἰσθάνεσθαι. πρὸς δὲ τούτοις οἱ δύσπνοοι καὶ οἱ πονοῦντες καὶ οἱ καθεύδοντες μᾶλλον ἂν αἰσθάνοιντο τῶν ὁσμῶν· τὸν πλεῖστον γὰρ ἔλκουσιν ἀέρα. νῦν δὲ συμβαίνει τοῦναντίον.

[22] οὐ γὰρ ἴσως καθ' αὐτὸ τὸ ἀναπνεῖν αἴτιον τῆς ὁσφρήσεως, ἀλλὰ κατὰ συμβεβηκός, ὥς ἔκ τε τῶν ἄλλων ζώων μαρτυρεῖται καὶ διὰ τῶν εἰρημένων παθῶν· ὁ δ' ὥς ταύτης οὐσης τῆς αἰτίας καὶ ἐπὶ τέλει πάλιν εἶρηκεν ὥσπερ ἐπισημαινόμενος

ὅδε μὲν οὖν πνοιῆς τε λελόγχασι πάντα καὶ ὁσμῶν.

οὐκ ἀληθές <δὲ> οὐδὲ τὸ μάλιστα ὁσφραίνεσθαι τῶν κούφων, ἀλλὰ δεῖ καὶ ὁσμήν ἐνυπάρχειν. ὁ γὰρ ἀήρ καὶ τὸ πῦρ κουφότατα μὲν, οὐ ποιοῦσι δὲ αἴσθησιν ὁσμῆς.

[23] ὡσαύτως δ' ἂν τις καὶ περὶ τὴν φρόνησιν ἀπορήσειεν, εἰ γὰρ τῶν αὐτῶν ποιεῖ καὶ τὴν αἴσθησιν. καὶ γὰρ ἅπαντα μεθέξει τοῦ φρονεῖν. καὶ ἅμα πῶς ἐνδέχεται καὶ ἐν ἀλλοιώσει καὶ ὑπὸ τοῦ ὁμοίου γίνεσθαι τὸ φρονεῖν; τὸ γὰρ ὁμοιον οὐκ ἀλλοιοῦται τῷ ὁμοίῳ. τὸ δὲ δὴ τῷ αἵματι φρονεῖν καὶ παντελῶς ἄτοπον· πολλὰ γὰρ τῶν ζώων ἄναιμα, τῶν δὲ ἐναίμων τὰ περὶ τὰς αἰσθήσεις ἀναιμότατα τῶν μερῶν. ἔτι καὶ ὁστοῦν καὶ θριξ αἰσθάνοιτ' ἂν, ἐπεὶ οὖν ἐξ ἀπάντων ἐστὶ τῶν στοιχείων. καὶ συμβαίνει ταῦτό εἶναι τὸ φρονεῖν καὶ αἰσθάνεσθαι καὶ ἡδεσθαι καὶ <τὸ> λυπεῖσθαι καὶ [τὸ] ἄγνοεῖν· ἅμφω γὰρ ποιεῖ τοῖς ἀνομοίοις. ὥσθ' ἅμα τῷ μὲν ἄγνοεῖν ἔδει γίνεσθαι λύπην, τῷ δὲ φρονεῖν ἡδονήν.

[24] ἄτοπον δὲ καὶ τὸ τὰς δυνάμεις ἐκάστοις ἐγγίνεσθαι διὰ τὴν ἐν τοῖς μορίοις τοῦ αἵματος σύγκρασιν, ὥς ἢ τὴν γλῶτταν αἰτίαν τοῦ εὖ λέγειν <οὔσαν ἢ> τὰς χεῖρας τοῦ δημιουργεῖν, ἀλλ' οὐκ ὀργάνου τάξιν ἔχοντα. διὸ καὶ μᾶλλον ἂν τις ἀποδοίῃ τῇ μορφῇ τὴν αἰτίαν ἢ τῇ κράσει τοῦ αἵματος, ἢ χωρὶς διανοίας ἐστίν· οὕτως γὰρ ἔχει καὶ ἐπὶ τῶν ἄλλων ζώων. Ἐμπεδοκλῆς μὲν οὖν ἔοικεν ἐν πολλοῖς διαμαρτάνειν.

[25] Τῶν δὲ μὴ τῷ ὁμοίῳ ποιούντων τὴν αἴσθησιν Ἀλκμαίων μὲν πρῶτον ἀφορίζει τὴν πρὸς τὰ ζῶα διαφοράν. ἀνθρωπον γὰρ φησι τῶν ἄλλων διαφέρειν ὅτι μόνος ξυνήσι, τὰ δ' ἄλλα αἰσθάνεται μὲν οὐ ξυνήσι δέ, ὥς ἕτερον ὄν τὸ φρονεῖν καὶ αἰσθάνεσθαι, καὶ οὐ, καθάπερ Ἐμπεδοκλῆς, ταυτόν.

ἔπειτα περὶ ἐκάστης λέγει. ἀκούειν μὲν οὖν φησι τοῖς ὤσιν, διότι κενὸν ἐν αὐτοῖς ἐνυπάρχει· τοῦτο γὰρ ἦχειν. φθέγγεσθαι δὲ τῷ κοίλῳ, τὸν ἀέρα δ' ἀντηχεῖν. ὁσφραίνεσθαι δὲ ῥίσιν ἅμα τῷ ἀναπνεῖν ἀνάγοντα τὸ πνεῦμα πρὸς τὸν ἐγκέφαλον. γλώττη δὲ τοὺς χυμοὺς κρίνειν· χλιαρὰν γὰρ οὕσαν καὶ μαλακὴν τήκειν τῇ θερμότητι· δέχεσθαι δὲ καὶ διαδιδόναι διὰ τὴν μανότητα καὶ ἀπαλότητα.

[26] ὀφθαλμοὺς δὲ ὁρᾶν διὰ τοῦ πέριξ ὕδατος· ὅτι δ' ἔχει πῦρ δῆλον εἶναι, πληγέντος γὰρ ἐκλάμπειν. ὁρᾶν δὲ τῷ στίλβοντι καὶ τῷ διαφανεῖ, ὅταν ἀντιφαίνει, καὶ ὅσῳ ἂν καθαρώτερον ἢ μᾶλλον. ἀπάσας δὲ τὰς αἰσθήσεις συνηρτησθαι πῶς πρὸς τὸν ἐγκέφαλον, διὸ καὶ πηροῦσθαι κινουμένου καὶ μεταλλάττοντος τὴν χώραν· ἐπιλαμβάνειν γὰρ τοὺς πόρους, δι' ὧν αἱ αἰσθήσεις. περὶ δὲ ἀφῆς οὐκ εἴρηκεν οὔτε πῶς οὔτε τίνι γίνεται. [ἀλλ'] Ἀλκμαίων μὲν οὖν ἐπὶ τοσοῦτον ἀφώρικεν.

[27] Ἀναξαγόρας δὲ γίνεσθαι μὲν τοῖς ἐναντίοις· τὸ γὰρ ὅμοιον ἀπαθὲς ὑπὸ τοῦ ὁμοίου. καθ' ἐκάστην δ' ἰδίᾳ πειρᾶται διαριθμεῖν. ὁρᾶν μὲν γὰρ τῇ ἐμφάσει τῆς κόρης, οὐκ ἐμφαίνεσθαι δὲ εἰς τὸ ὁμόχρων, ἀλλ' εἰς τὸ διάφορον. καὶ τοῖς μὲν πολλοῖς μεθ' ἡμέραν, ἐνίοις δὲ νύκτωρ εἶναι τὸ ἀλλόχρων, διὸ ὀξυωπεῖν τότε. ἀπλῶς δὲ τὴν νύκτα μᾶλλον ὁμόχρων εἶναι τοῖς ὀφθαλμοῖς. ἐμφαίνεσθαι δὲ μεθ' ἡμέραν, ὅτι τὸ φῶς συναίτιον τῆς ἐμφάσεως· τὴν δὲ χροάν τὴν κρατοῦσαν μᾶλλον εἰς τὴν ἐτέραν ἐμφαίνεσθαι [εἰς].

[28] τὸν αὐτὸν δὲ τρόπον καὶ τὴν ἀφήν καὶ τὴν γεῦσιν κρίνειν· τὸ γὰρ ὁμοίως θερμὸν καὶ ψυχρὸν οὔτε θερμαίνειν οὔτε ψύχειν πλησιάζον οὐδὲ δὴ τὸ γλυκὺ καὶ τὸ ὀξύ δι' αὐτῶν γνωρίζειν, ἀλλὰ τῷ μὲν θερμῷ τὸ ψυχρὸν, τῷ δ' ἀλμυρῷ τὸ πότιμον, τῷ δ' ὀξεῖ τὸ γλυκὺ κατὰ τὴν ἑλλειψιν τὴν ἐκάστου· πάντα γὰρ ἐνυπάρχειν ἴεσθιν ἐν ἡμῖν. ὡσαύτως δὲ καὶ ὁσφραίνεσθαι καὶ ἀκούειν τὸ μὲν ἅμα τῇ ἀναπνοῇ, τὸ δὲ τῷ δικνεῖσθαι τὸν ψόφον ἄχρι τοῦ ἐγκεφάλου· τὸ γὰρ περιέχον ὅστουν εἶναι κοῖλον, εἰς ὃ ἐμπίπτειν τὸν ψόφον.

[29] ἅπασαν δ' αἴσθησιν τὰ λύπης, ὅπερ ἂν δόξειεν ἀκόλουθον εἶναι τῇ ὑποθέσει· πᾶν γὰρ τὸ ἀνόμοιον ἀπτόμενον πόνον παρέχει. φανερόν δὲ τοῦτο τῷ τε τοῦ χρόνου πλήθει καὶ τῇ τῶν αἰσθητῶν ὑπερβολῇ. τὰ τε γὰρ λαμπρὰ χρώματα καὶ τοὺς ὑπερβάλλοντας ψόφους λύπην ἐμποιεῖν καὶ οὐ πολὺν χρόνον δύνασθαι τοῖς αὐτοῖς ἐπιμένειν. αἰσθητικώτερα δὲ τὰ μείζω ζῶα καὶ ἀπλῶς εἶναι κατὰ τὸ μέγεθος τὴν αἴσθησιν. ὅσα μὲν γὰρ μεγάλους καὶ καθαρὸς καὶ λαμπροὺς ὀφθαλμοὺς ἔχει, μεγάλα τε καὶ πόρρωθεν ὁρᾶν, ὅσα δὲ μικροῦς, ἐναντίως.

[30] ὁμοίως δὲ καὶ ἐπὶ τῆς ἀκοῆς. τὰ μὲν γὰρ μεγάλα τῶν μεγάλων καὶ τῶν πόρρωθεν ἀκούειν, τὰ δ' ἐλάττω λανθάνειν, τὰ δὲ μικρὰ τῶν μικρῶν καὶ τῶν ἐγγύς. καὶ ἐπὶ τῆς ὁσφρήσεως ὁμοίως· ὅζειν μὲν γὰρ μᾶλλον τὸν λεπτὸν ἀέρα, θερμαινόμενον μὲν γὰρ καὶ μανούμενον ὅζειν. ἀναπνεόν δὲ τὸ μὲν μέγα ζῶον ἅμα τῷ μανῶ καὶ τὸ πυκνὸν ἔλκειν, τὸ δὲ μικρὸν αὐτὸ τὸ μανόν, διὸ καὶ τὰ μεγάλα μᾶλλον αἰσθάνεσθαι. καὶ γὰρ τὴν ὁσμὴν ἐγγύς εἶναι μᾶλλον ἢ πόρρω διὰ τὸ πυκνότεραν εἶναι, σκεδαννυμένην δὲ ἀσθενῇ. σχεδὸν δὲ ὡς εἰπεῖν οὐκ αἰσθάνεσθαι τὰ μὲν μεγάλα τῆς λεπτῆς [ἀέρος], τὰ δὲ μικρὰ τῆς πυκνῆς.

[31] Τὸ μὲν οὖν τοῖς ἐναντίοις ποιεῖν τὴν αἴσθησιν ἔχει τινὰ λόγον, ὥσπερ ἐλέγχθη· δοκεῖ γὰρ ἡ ἀλλοίωσις οὐχ ὑπὸ τῶν ὁμοίων, ἀλλ' ὑπὸ τῶν ἐναντίων εἶναι. καίτοι καὶ τοῦτο δεῖται πίστεως, εἰ ἀλλοίωσις ἡ αἴσθησις εἴ τε τὸ ἐναντίον τοῦ ἐναντίου κριτικόν. τὸ δὲ μετὰ λύπης ἅπασαν εἶναι [ψευδός] οὐτ' ἐκ τῆς χρήσεως ὁμολογεῖται, τὰ μὲν <γὰρ> μεθ' ἡδονῆς τὰ δὲ πλεῖστα ἄνευ λύπης ἐστίν, οὐτ' ἐκ τῶν εὐλόγων. ἡ μὲν γὰρ αἴσθησις κατὰ φύσιν, οὐδὲν δὲ τῶν φύσει βίᾳ καὶ μετὰ λύπης, ἀλλὰ μᾶλλον μεθ' ἡδονῆς, ὅπερ καὶ φαίνεται συμβαῖνον. τὰ γὰρ πλείω καὶ πλεονάκις ἡδόμεθα καὶ αὐτὸ δὲ τὸ αἰσθάνεσθαι χωρὶς τῆς περὶ ἕκαστον ἐπιθυμίας διώκομεν.

[32] ἔτι δ' ἐπεὶ καὶ ἡδονὴ καὶ λύπη γίνεται διὰ τῆς αἰσθήσεως, ἅπαν δὲ φύσει πρὸς τὸ βέλτιόν ἐστι, καθάπερ ἡ ἐπιστήμη, μᾶλλον ἂν εἴη μεθ' ἡδονῆς ἢ μετὰ λύπης. ἀπλῶς δ' εἴπερ μηδὲ τὸ διανοεῖσθαι μετὰ λύπης, οὐδὲ τὸ αἰσθάνεσθαι· τὸν αὐτὸν γὰρ ἔχει λόγον ἐκάτερον πρὸς τὴν αὐτὴν χρεῖαν. ἀλλὰ μὴν οὐδὲ αἱ τῶν αἰσθητῶν ὑπερβολαὶ καὶ τὸ τοῦ χρόνου πλῆθος οὐδὲν σημεῖον ὡς μετὰ λύπης ἐστίν, ἀλλὰ μᾶλλον ὡς ἐν συμμετρίᾳ τινὶ καὶ κράσει πρὸς τὸ αἰσθητὸν ἢ αἴσθησις. διόπερ ἴσως τὸ μὲν ἐλλεῖπον ἀναίσθητον, τὸ δ' ὑπερβάλλον λύπην τε ποιεῖ καὶ φθείρει.

[33] συμβαίνει τοίνυν τὸ κατὰ φύσιν ἐκ τοῦ παρὰ φύσιν σκοπεῖν· ἡ γὰρ ὑπερβολὴ παρὰ φύσιν. ἐπεὶ τό γε ἅπ' ἐνίων καὶ ἐνίοτε λυπεῖσθαι, καθάπερ καὶ ἡδεσθαι, φανερόν καὶ ὁμολογούμενον· ὥστ' οὐδὲν μᾶλλον διὰ γε τοῦτο μετὰ λύπης ἢ μεθ' ἡδονῆς ἐστίν, ἀλλ' ἴσως μετ' οὐδετέρου κατὰ γε τὸ ἀληθές· οὐδὲ γὰρ ἂν δύναίτο κρίνειν, ὥσπερ οὐδὲ ἡ διάνοια συνεχῶς οὔσα μετὰ λύπης ἢ ἡδονῆς. ἀλλὰ τοῦτο μὲν ἀπὸ μικρᾶς ἀρχῆς ἐφ' ὅλην μετήνεγκε τὴν αἴσθησιν.

[34] ὅταν δὲ λέγῃ τὰ μείζω μᾶλλον αἰσθάνεσθαι καὶ ἀπλῶς κατὰ τὸ μέγεθος τῶν αἰσθητηρίων εἶναι τὴν αἴσθησιν, τὸ μὲν αὐτῶν ἔχει τινὰ ἀπορίαν, οἷον πότερον τὰ μικρὰ μᾶλλον ἢ τὰ μεγάλα τῶν ζώων αἰσθητικά· δόξειε γὰρ ἂν ἀκριβεστέρας αἰσθήσεως εἶναι τὰ μικρὰ μὴ λανθάνειν, καὶ ἅμα τὸ τὰ ἐλάττω

δυνάμενον καὶ τὰ μείζω κρίνειν οὐκ ἄλογον. ἅμα δὲ καὶ δοκεῖ περὶ ἐνίας αἰσθήσεις βέλτιον ἔχειν τὰ μικρὰ τῶν μεγάλων, ὥστε ταύτη μὲν χείρων ἢ τῶν μειζόνων αἴσθησις.

[35] εἰ δ' αὖ φαίνεται καὶ πολλὰ λανθάνειν τὰ μικρά [τῶν μειζόνων οἶον οἱ ψόφοι, χρώματα], βελτίων ἢ τῶν μειζόνων· ἅμα δὲ καὶ εὐλογον, ὥσπερ καὶ τὴν ὅλην τοῦ σώματος κρᾶσιν, ὁμοίως ἔχειν καὶ τὰ περὶ τὰς αἰσθήσεις. τοῦτο μὲν οὖν, ὥσπερ ἐλέχθη, διαπορήσειεν ἂν τις, εἰ ἄρα καὶ δεῖ λέγειν οὕτως· οὐ γὰρ ἐν τοῖς ὁμοίοις γένεσιν ἀφώρισται κατὰ τὸ μέγεθος, ἀλλὰ κυριώτατα ἴσως ἢ τοῦ σώματος διάθεσις τε καὶ κρᾶσις. τὸ δὲ πρὸς τὰ μεγέθη τὴν συμμετρίαν ἀποδιδόναι τῶν αἰσθητῶν ἔοικεν ὁμοίως λέγειν Ἐμπεδοκλεῖ· τῷ γὰρ ἐναρμόττειν τοῖς πόροις ποιεῖ τὴν αἴσθησιν. πλὴν ἐπὶ τῆς ὁσφρήσεως ἴδιον συμβαίνει δυσχερές· ὅζειν μὲν γὰρ φησι τὸν λεπτόν ἀέρα μᾶλλον, ὁσφραίνεσθαι δὲ ἀκριβέστερον ὅσα τὸν πυκνὸν ἢ τὸν μανὸν ἔλκει.

[36] περὶ δὲ τῆς ἐμφάσεως κοινὴ τίς ἐστὶν ἡ δόξα· σχεδὸν γὰρ οἱ πολλοὶ τὸ ὄρᾶν οὕτως ὑπολαμβάνουσι διὰ τὴν γινομένην ἐν τοῖς ὀφθαλμοῖς ἔμφασιν. τοῦτο δὲ οὐκέτι συνεῖδον ὥς οὔτε τὰ μεγέθη σύμμετρα τὰ ὀρώμενα τοῖς ἐμφαινομένοις οὔτε ἐμφαίνεσθαι πολλὰ ἅμα καὶ τὰναντία δυνατόν, ἔτι δὲ κίνησις καὶ διάστημα καὶ μέγεθος ὀρατὰ μὲν, ἔμφασιν δὲ οὐ ποιοῦσιν. ἐνίοις δὲ τῶν ζώων οὐδὲν ἐμφαίνεται, καθάπερ τοῖς σκληροφθάλμοις καὶ τοῖς ἐνύδροις. ἔτι δὲ καὶ τῶν ἀνύχων διὰ γε τοῦτο πολλὰ ἂν ὀρῶεν· καὶ γὰρ ἐν ὕδατι καὶ χαλκῷ καὶ ἐτέροις πολλοῖς ἐστὶν ἀνάγκασις.

[37] φησὶ δὲ καὶ αὐτὸς ἐμφαίνεσθαι μὲν εἰς ἄλληλα <τὰ> χρώματα, μᾶλλον δὲ τὸ ἰσχυρὸν εἰς τὸ ἀσθενές· ὥστε ἐκάτερον μὲν ἐχρῆν ὄρᾶν, μᾶλλον δὲ <τὸ> μέλαν καὶ ὅλως <τὸ> ἀσθενέστερον. διὸ καὶ τὴν ὄψιν ὁμόχρων ποιεῖ τῇ νυκτὶ καὶ τὸ φῶς αἴτιον τῆς ἐμφάσεως. καίτοι πρῶτον μὲν τὸ φῶς ὀρῶμεν αὐτὸ δι' οὐδεμιᾶς ἐμφάσεως, ἔπειτα οὐδὲν ἦττον τὰ μέλανα τῶν λευκῶν οὐκ ἔχει φῶς. ἔτι δὲ καὶ τοῖς ἄλλοις ἀεὶ τὴν ἔμφασιν ὀρῶμεν εἰς τὸ λαμπρότερον καὶ καθαρώτερον γινομένην, ὥσπερ καὶ αὐτὸς λέγει τοὺς ὑμένας τῶν ὀμμάτων λεπτοὺς εἶναι καὶ λαμπροὺς. τιθέασι δὲ καὶ τὴν ὄψιν αὐτὴν οἱ πολλοὶ πυρός, <ὡς> τούτου τὰς χροὰς μετεχούσας μᾶλλον. Ἀναξαγόρας μὲν οὖν, ὥσπερ ἐλέχθη, κοινὴν τινα ταύτην καὶ παλαιὰν δόξαν ἀναφέρει. πλὴν ἰδίως ἐπὶ πάσαις λέγει ταῖς αἰσθήσεσι καὶ μάλιστα ἐπὶ τῇ ὄψει, διότι τὸ μέγα αἰσθανόμενόν ἐστιν, οὐ δηλοῖ δὲ τὰς σωματικωτέρας αἰσθήσεις.

[38] Κλειδῆμος δὲ μόνος ἰδίως εἴρηκε περὶ τῆς ὄψεως· αἰσθάνεσθαι γὰρ φησι τοῖς ὀφθαλμοῖς μόνον ὅτι διαφανεῖς· ταῖς <δ'> ἀκοαῖς, ὅτι ἐμπίπτων ὁ

ἀήρ κινεῖ· ταῖς δὲ ῥίσιν ἐφελκομένους τὸν ἀέρα, τοῦτον γὰρ ἀναμίγνυσθαι· τῇ δὲ γλώσση τοὺς χυμοὺς καὶ τὸ θερμὸν καὶ τὸ ψυχρὸν διὰ τὸ σομφὴν εἶναι· τῷ δὲ ἄλλῳ σώματι παρὰ μὲν ταῦτ' οὐθέν, αὐτῶν δὲ τούτων καὶ τὸ θερμὸν καὶ τὰ ὑγρά καὶ τὰ ἐναντία· μόνον δὲ τὰς ἀκοὰς αὐτὰς μὲν οὐδὲν κρίνειν, εἰς δὲ τὸν νοῦν διαπέμπειν, οὐχ ὥσπερ Ἀναξαγόρας ἀρχὴν ποιεῖ πάντων τὸν νοῦν.

[39] Διογένης δ' ὥσπερ τὸ ζῆν καὶ τὸ φρονεῖν τῷ ἀέρι καὶ τὰς αἰσθήσεις ἀνάπτει· διὸ καὶ δόξειεν ἂν τῷ ὁμοίῳ ποιεῖν (οὐδὲ γὰρ τὸ ποιεῖν εἶναι καὶ πάσχειν, εἰ μὴ πάντα ἦν ἐξ ἑνός)· τὴν μὲν ὄσφρησιν τῷ περὶ τὸν ἐγκέφαλον ἀέρι· τοῦτον γὰρ ἄθρουν εἶναι καὶ σύμμετρον τῇ ὁσμῇ· τὸν γὰρ ἐγκέφαλον αὐτὸν μανὸν καὶ <τὰ> φλεβία, λεπτότατον δ' ἐν οἷς ἡ διάθεσις ἀσύμμετρος, καὶ οὐ μίγνυσθαι ταῖς ὁσμαῖς· ὥς εἴ τις εἴη τῇ κράσει σύμμετρος, δῆλον ὡς αἰσθανόμενον ἂν.

[40] τὴν δ' ἀκοήν, ὅταν ὁ ἐν τοῖς ὤσιν ἀήρ κινήθῃς ὑπὸ τοῦ ἔξω διαδῶ πρὸς τὸν ἐγκέφαλον. τὴν δὲ ὄφιν [ὄρᾱν] ἐμφαινομένων εἰς τὴν κόρην, ταύτην δὲ μίγνυμένην τῷ ἐντὸς ἀέρι ποιεῖν αἴσθησιν· σημεῖον δέ· ἐὰν γὰρ φλεγμασία γένηται τῶν φλεβῶν, οὐ μίγνυσθαι τῷ ἐντὸς οὐδ' ὄρᾱν ὁμοίως τῆς ἐμφάσεως οὔσης. τὴν δὲ γεῦσιν τῇ γλώττῃ διὰ τὸ μανὸν καὶ ἀπαλόν. περὶ δὲ ἀφῆς οὐδὲν ἀφώρισε, οὔτε πῶς οὔτε τίνων ἐστίν. ἀλλὰ μετὰ ταῦτα πειράται λέγειν, διὰ τί συμβαίνει τὰς αἰσθήσεις ἀκριβεστέρας εἶναι καὶ τῶν ποίων.

[41] ὄσφρησιν μὲν οὖν ὀξύτατην οἷς ἐλάχιστος ἀήρ ἐν τῇ κεφαλῇ, τάχιστα γὰρ μίγνυσθαι· καὶ πρὸς τούτοις ἐὰν ἔλκη διὰ μακροτέρου καὶ στενωτέρου, θάπτον γὰρ οὕτω κρίνεσθαι· διόπερ ἔνια τῶν ζώων ὀσφραντικώτερα τῶν ἀνθρώπων εἶναι· οὐ μὴν ἀλλὰ συμμέτρου γε οὔσης τῆς ὁσμῆς τῷ ἀέρι πρὸς τὴν κρᾶσιν μάλιστα ἂν αἰσθάνεσθαι τὸν ἄνθρωπον. ἀκούειν δ' ὀξύτατα, ὧν αἶ τε φλέβες λεπταὶ καθάπερ ἴτῃ αἰσθήσει καὶ τῇ ἀκοῇ τέτρηται βραχὺ καὶ λεπτὸν καὶ ἰθὺ καὶ πρὸς τούτοις τὸ οὗς ὀρθὸν ἔχει καὶ μέγα· κινούμενον γὰρ τὸν ἐν τοῖς ὤσιν ἀέρα κινεῖν τὸν ἐντός. ἐὰν δὲ εὐρυτέρα ᾖ, κινουμένου τοῦ ἀέρος ἦχον εἶναι καὶ τὸν ψόφον ἀναθρὸν διὰ τὸ μὴ προσπίπτειν πρὸς ἡρεμοῦν.

[42] ὄρᾱν δ' ὀξύτατα, ὅσα τε τὸν ἀέρα καὶ τὰς φλέβας ἔχει λεπτάς, ὥσπερ ἐπὶ τῶν ἄλλων καὶ ὅσα τὸν ὀφθαλμὸν λαμπρότατον. μάλιστα δ' ἐμφαίνεσθαι τὸ ἐναντίον χρῶμα· διὸ τοὺς μελανοφθάλμους μεθ' ἡμέραν καὶ τὰ λαμπρὰ μᾶλλον ὄρᾱν, τοὺς δ' ἐναντίους νύκτωρ. ὅτι δὲ ὁ ἐντός ἀήρ αἰσθάνεται μικρὸν ὢν μόριον τοῦ θεοῦ, σημεῖον εἶναι, διότι πολλάκις πρὸς ἄλλα τὸν νοῦν ἔχοντες οὐθ' ὀρῶμεν οὐτ' ἀκούομεν.

[43] ἡδονὴν δὲ καὶ λύπην γίνεσθαι τόνδε τὸν τρόπον. ὅταν μὲν πολλὸς ὁ ἀὴρ μίσηται τῷ αἵματι καὶ κουφίζῃ κατὰ φύσιν ὦν καὶ κατὰ πᾶν τὸ σῶμα διεξιῶν, ἡδονήν· ὅταν δὲ παρὰ φύσιν καὶ μὴ μίσηται συνιζάνοντος τοῦ αἵματος καὶ ἀσθενεστεροῦ καὶ πυκνοτέρου γινομένου, λύπην. ὁμοίως καὶ θάρσος καὶ ὑγίειαν καὶ τάναντία. κριτικώτατον δὲ ἡδονῆς τὴν γλῶτταν· ἀπαλώτατον γὰρ εἶναι καὶ μανὸν καὶ τὰς φλέβας ἀπάσας ἀνήκειν εἰς αὐτήν· διὸ σημειὰ τε πλεῖστα τοῖς κάμνουσιν ἐπ’ αὐτῆς εἶναι, καὶ τῶν ἄλλων ζώων τὰ χρώματα μνηύειν· ὅποσα γὰρ ἂν ἦ καὶ ὅποια, τοσαῦτα ἐμφαίνεσθαι. τὴν μὲν οὖν αἴσθησιν οὕτω καὶ διὰ τοῦτο γίνεσθαι.

[44] φρονεῖν δ’, ὥσπερ ἐλέχθη, τῷ ἀέρι καθαρῷ καὶ ξηρῷ· κωλύειν γὰρ τὴν ἰκμάδα τὸν νοῦν· διὸ καὶ ἐν τοῖς ὕπνοις καὶ ἐν ταῖς μέθαις καὶ ἐν ταῖς πλησμοναῖς ἤττον φρονεῖν. ὅτι δὲ ἡ ὑγρότης ἀφαιρεῖται τὸν νοῦν, σημεῖον, διότι τὰ ἄλλα ζῷα χεῖρω τὴν διάνοιαν· ἀναπνεῖν τε γὰρ τὸν ἀπὸ τῆς γῆς ἀέρα καὶ τροφὴν ὑγροτέραν προσφέρεσθαι. τοὺς δὲ ὄρνιας ἀναπνεῖν μὲν καθαρόν, φύσιν δὲ ὁμοίαν ἔχειν τοῖς ἰχθύσι· καὶ γὰρ τὴν σάρκα στιφράν, καὶ τὸ πνεῦμα οὐ διέειναι διὰ παντός, ἀλλὰ ἐστάναι περὶ τὴν κοιλίαν. διὸ τὴν μὲν τροφὴν ταχὺ πέττειν, αὐτὸ δ’ ἄφρον εἶναι. συμβάλλεσθαι δέ τι πρὸς τῇ τροφῇ καὶ τὸ στόμα καὶ τὴν γλῶτταν· οὐ γὰρ δύνασθαι συνεῖναι ἀλλήλων. τὰ δὲ φυτὰ διὰ τὸ μὴ εἶναι κοῖλα μηδὲ ἀναδέχεσθαι τὸν ἀέρα παντελῶς ἀφηρησθαι τὸ φρονεῖν.

[45] ταῦτόν δ’ αἴτιον εἶναι καὶ ὅτι τὰ παιδιά ἄφρονα. πολὺ γὰρ ἔχειν τὸ ὑγρόν, ὥστε μὴ δύνασθαι διὰ παντὸς διέειναι τοῦ σώματος, ἀλλὰ ἐκκρίνεσθαι περὶ τὰ στήθη, διὸ νωθὴ τε εἶναι καὶ ἄφρονα. ὀργίλα δὲ καὶ ὅλως ὀξύρροπα καὶ εὐμετάπτωτα διὰ τὸ ἐκ μικρῶν κρίνεσθαι τὸν ἀέρα πολύν· ὅπερ καὶ τῆς λήθης αἴτιον εἶναι· διὰ γὰρ τὸ μὴ ἰέναι διὰ παντὸς τοῦ σώματος οὐ δύνασθαι συνεῖναι· σημεῖον δέ· καὶ γὰρ τοῖς ἀναμνησκομένοις τὴν ἀπορίαν εἶναι περὶ τὸ στήθος, ὅταν δὲ εὖρωσιν, ‘διασκίδνασθαι’ καὶ ἀνακουφίζεσθαι τῆς λύπης.

[46] Διογένης μὲν οὖν πάντα βουλόμενος ἀνάπτειν τῷ ἀέρι πολλῶν ἀπολείπεται πρὸς πίστιν. οὔτε γὰρ τὴν αἴσθησιν οὔτε τὴν φρόνησιν ἴδιον ποιεῖ τῶν ἐμψύχων. ἴσως γὰρ καὶ ἀέρα τοιοῦτον καὶ κρᾶσιν καὶ συμμετρίαν ἐνδέχεται πανταχοῦ καὶ πᾶσιν ὑπάρχειν, εἰ δὲ μή, τοῦτο αὐτὸ λεκτέον. ἔτι δὲ καὶ ἐν αὐταῖς ταῖς διαφόροις αἰσθήσεσιν, ὥστε ἐνδέχεσθαι τὰ τῆς ὀψεως τὴν ἀκοὴν κρίνειν καὶ ἅπερ ἡμεῖς τῇ ὁσφρήσει, ταῦτα ἄλλο τι ζῷον ἐτέρα διὰ τὸ τὴν αὐτὴν ἔχειν κρᾶσιν· ὥστε καὶ τῇ περὶ τὸν θώρακα ἀναπνοῇ κρίνειν τότε τὰς ὁσμάς· ἐνδέχεται γὰρ ἐνίοτε σύμμετρον εἶναι ταύταις.

[47] εὐήθη δὲ καὶ τὰ περὶ τὴν ὄψιν, ὥς τῷ ἀέρι τῷ ἐντὸς ὀρώμεν· ἀλλὰ ἐλέγχει μὲν πῶς τοὺς τὴν ἔμφασιν ποιοῦντας, οὐ μὴν αὐτὸς λέγει τὴν αἰτίαν. ἔπειτα τὸ μὲν αἰσθάνεσθαι καὶ ἡδεσθαι καὶ φρονεῖν τῇ τε ἀναπνοῇ καὶ τῇ μίξει τοῦ αἵματος ἀποδίδωσι. πολλὰ δὲ τῶν ζώων τὰ μὲν ἄναιμα, τὰ δὲ ὅλως οὐκ ἀναπνεῖ· καὶ εἰ δεῖ διὰ παντὸς τοῦ σώματος διέναι τὴν ἀναπνοήν, ἀλλὰ «μὴ» μορίων τινῶν (μικροῦ γὰρ ἔνεκα τοῦτ' ἔστιν), οὐθὲν ἂν κωλύοι διὰ γε τοῦτο καὶ τὰ πάντα καὶ μεμνησθαι καὶ φρονεῖν. ἔτι δὲ εἰ καὶ τοῦτο συνέβαιnen, οὐκ ἂν ἦν ἐμποδόν. οὐ γὰρ ἐν ἅπασι τοῖς μέρεσιν ὁ νοῦς, οἷον ἐν τοῖς σκέλεσι καὶ τοῖς ποσίν, ἀλλὰ ἐν ὀρισμένοις, δι' ὧν καὶ οἱ ἐν ἡλικίᾳ καὶ μέμνηνται καὶ φρονοῦσιν.

[48] εὐήθες δὲ καὶ τὸ τοὺς ἀνθρώπους διαφέρειν τῷ καθαρώτερον ἀναπνεῖν, ἀλλ' οὐ τὴν φύσιν, καθάπερ καὶ τὰ ἔμψυχα τῶν ἀψύχων. ἐχρῆν γὰρ εὐθὺς μεταλλάζαντα τόπον διαφέρειν τῷ φρονεῖν καὶ τῶν ἀνθρώπων δὲ τοὺς ἐν τοῖς ὑψηλοῖς ἐμφρονεστέρους εἶναι, τῶν πάντων δὲ μάλιστα τοὺς ὀρθίτας· οὐ γὰρ τοσοῦτον ἢ τῆς σαρκὸς διαφέρει φύσις, ὅσον ἢ τοῦ ἀέρος καθαριότης. ἔτι δὲ τὰ φυτὰ μὴ φρονεῖν διὰ τὸ μὴ ἔχειν κενόν. οἷς δ' ἐνυπάρχει, ταῦτα πάντα φρονεῖν. Διογένης μὲν οὖν, ὥσπερ εἵπομεν, ἅπαντα προθυμούμενος ἀνάγειν εἰς τὴν ἀρχὴν πολλὰ διαμαρτάνει τῶν εὐλόγων.

[49] Δημόκριτος δὲ περὶ μὲν αἰσθήσεως οὐ διορίζει, πότερα τοῖς ἐναντίοις ἢ τοῖς ὁμοίοις ἐστίν. εἰ μὲν γὰρ «τῷ» ἀλλοιοῦσθαι ποιεῖ τὸ αἰσθάνεσθαι, δόξειεν ἂν τοῖς διαφόροις· οὐ γὰρ ἀλλοιοῦνται τὸ ὅμοιον ὑπὸ τοῦ ὁμοίου· πάλιν δ' «εἰ» τὸ μὲν αἰσθάνεσθαι καὶ ἀπλῶς ἀλλοιοῦσθαι «τῷ» πάσχειν, ἀδύνατον δέ, φησί, τὰ μὴ ταῦτά πάσχειν, ἀλλὰ κἂν ἕτερα ὄντα ποιῇ οὐχ «ἢ» ἕτερα ἀλλ' ἢ ταυτόν τι ὑπάρχει, τοῖς ὁμοίοις. διὸ περὶ μὲν τούτων ἀμφοτέρως ἔστιν ὑπολαβεῖν. περὶ ἐκάστης δ' ἡδὴ αὐτῶν ἐν μέρει πειρᾶται λέγειν.

[50] ὁρᾶν μὲν οὖν ποιεῖ τῇ ἐμφάσει· ταύτην δὲ ἰδίως λέγει· τὴν γὰρ ἔμφασιν οὐκ εὐθὺς ἐν τῇ κόρῃ γίνεσθαι, ἀλλὰ τὸν ἀέρα τὸν μεταξὺ τῆς ὀψεως καὶ τοῦ ὀρωμένου τυποῦσθαι συστελλόμενον ὑπὸ τοῦ ὀρωμένου καὶ τοῦ ὀρώοντος· ἅπαντος γὰρ αἰετὶ γίνεσθαι τινα ἀπορροήν· ἔπειτα τοῦτον στερεὸν ὄντα καὶ ἀλλόχρων ἐμφαίνεσθαι τοῖς ὁμμασιν ὑγροῖς. καὶ τὸ μὲν πυκνὸν οὐ δέχεσθαι, τὸ δὲ ὑγρὸν διέναι. διὸ καὶ τοὺς ὑγροὺς τῶν σκληρῶν ὀφθαλμῶν ἀμείνους εἶναι πρὸς τὸ ὁρᾶν, εἰ ὁ μὲν ἕξω χιτῶν ὥς λεπτότατος καὶ πυκνότατος εἴη, τὰ δ' ἐντὸς ὥς μάλιστα σομφὰ καὶ κενὰ πυκνῆς καὶ στιφρᾶς σαρκός, ἔτι δὲ ἱκμάδος παχείας τε καὶ λιπαρᾶς, καὶ αἱ φλέβες «αἰ» κατὰ τοὺς ὀφθαλμοὺς εὐθεῖαι καὶ ἄνικμοι, ὥς «ὁμοιοσχημονεῖν» τοῖς ἀποτυπουμένοις. τὰ γὰρ

ὁμόφυλα μάλιστα ἕκαστον γνωρίζειν.

[51] Πρῶτον μὲν οὖν ἄτοπος ἡ ἀποτύπωσις ἢ ἐν τῷ ἀέρι. δεῖ γὰρ ἔχειν πυκνότητα καὶ μὴ 'θρύπτεσθαι' τὸ τυπούμενον, ὥσπερ καὶ αὐτὸς λέγει παραβάλλων τοιαύτην εἶναι τὴν ἐντύπωσιν, οἷον εἰ ἐκμάξεϊας εἰς κηρόν. ἔπειτα μᾶλλον ἐν ὕδατι τυποῦσθαι δυνατόν, ὅσῳ πυκνότερον ἦττον δὲ ὁρᾶται, καίτοι προσῆκε μᾶλλον. ὅλως δὲ ἀπορροὴν ποιοῦντα τῆς μορφῆς, ὥσπερ ἐν τοῖς περὶ τῶν εἰδῶν, τί δεῖ τὴν ἀποτύπωσιν ποιεῖν; αὐτὰ γὰρ ἐμφαίνεται τὰ εἶδωλα.

[52] εἰ δὲ δὴ τοῦτο συμβαίνει καὶ ὁ ἀήρ ἀπομάττεται καθάπερ κηρὸς ὠθεύμενος καὶ πυκνούμενος, πῶς καὶ ποία τις ἡ ἔμφασις γίνεται; δηλὸν γὰρ ὡς ἐπὶ προσώπου <ὁ> τύπος ἔσται τῷ ὀρωμένῳ καθάπερ ἐν τοῖς ἄλλοις. τοιούτου δ' ὄντος ἀδύνατον ἐξ ἐναντίας ἔμφασιν γίνεσθαι μὴ στραφέντος τοῦ τύπου. τοῦτο δ' ὑπὸ τίνος ἔσται καὶ πῶς, δεικτέον· οὐχ οἷόν τε γὰρ ἄλλως γίνεσθαι τὸ ὁρᾶν. ἔπειτα ὅταν ὁρᾶται πλείονα κατὰ τὸν αὐτὸν τόπον, πῶς ἐν τῷ αὐτῷ ἀέρι πλείους ἔσονται τύποι; καὶ πάλιν πῶς ἀλλήλους ὁρᾶν ἐνδέχεται; τοὺς γὰρ τύπους ἀνάγκη συμβάλλειν ἑαυτοῖς, ἑκάτερον ἀντιπρόσωπον ὄντα ἀφ' ὧν ἐστίν. ὥστε τοῦτο ζήτησιν ἔχει.

[53] καὶ πρὸς τούτῳ διὰ τί ποτε ἕκαστος αὐτὸς αὐτὸν οὐχ ὁρᾷ; καθάπερ γὰρ τοῖς τῶν πέλας ὄμμασιν, οἱ τύποι καὶ τοῖς ἑαυτῶν ἐμφαίνονται· ἂν, ἄλλως τε εἰ καὶ εὐθὺς ἀντιπρόσωποι κεῖνται καὶ ταῦτο συμβαίνει πάθος ὥσπερ ἐπὶ τῆς ἡχοῦς. ἀνακλᾶσθαι γὰρ φησι καὶ πρὸς αὐτὸν τὸν φθεγξάμενον τὴν φωνήν. ὅλως δὲ ἄτοπος ἡ τοῦ ἀέρος τύπωσις. ἀνάγκη γὰρ ἐξ ὧν λέγει πάντα ἐναποτυποῦσθαι τὰ σώματα καὶ πολλὰ ἐναλλάττειν, ὃ καὶ πρὸς τὴν ὄψιν ἐμπόδιον ἂν εἴη καὶ ἄλλως οὐκ εὐλογον. ἔτι δὲ εἴπερ ἡ τύπωσις διαμένει, καὶ μὴ φανερῶν [ὄντων] μηδὲ πλησίον ὄντων τῶν σωμάτων ἐχρῆν ὁρᾶν εἰ καὶ μὴ νύκτωρ, ἀλλὰ μεθ' ἡμέραν. καίτοι τοὺς γε τύπους οὐχ ἦττον εἰκὸς διαμένειν νυκτός, ὅσῳ ἐμψυχρότερος ὁ ἀήρ.

[54] ἀλλ' ἴσως τὴν ἔμφασιν ὁ ἥλιος ποιεῖ καὶ τὸ φῶς ὥσπερ ἐπιφέρων ἐπὶ τὴν ὄψιν, καθάπερ εἴκοι βούλεσθαι λέγειν· ἐπεὶ τό γε τὸν ἥλιον ἀπωθοῦντα ἀφ' ἑαυτοῦ καὶ ἀποπληττόμενον πυκνοῦν τὸν ἀέρα, καθάπερ φησὶν, ἄτοπον· διακρίνειν γὰρ πέφυκε μᾶλλον. ἄτοπον δὲ καὶ τὸ μὴ μόνον τοῖς ὄμμασιν, ἀλλὰ καὶ τῷ ἄλλῳ σώματι μεταδιδόναι τῆς αἰσθήσεως· φησὶ γὰρ διὰ τοῦτο κενότητα καὶ ὑγρότητα ἔχειν δεῖν τὸν ὀφθαλμόν, ἵν' ἐπὶ πλέον δέχεται καὶ τῷ ἄλλῳ σώματι παραδιδῶ. ἄλογον δὲ καὶ τὸ μάλιστα μὲν ὁρᾶν φάναι τὰ ὁμόφυλα, τὴν δὲ ἔμφασιν ποιεῖν τοῖς ἀλλόχρωσιν ὡς οὐκ ἐμφαινομένων τῶν

ὁμοίων. τὰ δὲ μεγέθη καὶ τὰ διαστήματα πῶς ἐμφαίνεται, καίπερ ἐπιχειρήσας λέγειν οὐκ ἀποδίδωσιν.

[55] περὶ μὲν οὖν ὅψεως ἰδίως ἓνια βουλόμενος λέγειν πλείω παραδίδωσι ζήτησιν. τὴν δ' ἀκοὴν παραπλησίως ποιεῖ τοῖς ἄλλοις. εἰς γὰρ τὸ κενὸν ἐμπίπτοντα τὸν ἀέρα κίνησιν ἐμποιεῖν· πλὴν ὅτι κατὰ πᾶν μὲν ὁμοίως τὸ σῶμα εἰσιέναι, μάλιστα δὲ καὶ πλείστον διὰ τῶν ὥτων, ὅτι διὰ πλείστου τε κενοῦ διέρχεται καὶ ἥκιστα 'διαμῖναι'. διὸ καὶ κατὰ μὲν τὸ ἄλλο σῶμα οὐκ αἰσθάνεσθαι, ταύτῃ δὲ μόνον. ὅταν δὲ ἐντὸς γένηται, 'σκιδνασθαι' διὰ τὸ τάχος· τὴν γὰρ φωνὴν εἶναι πυκνουμένου τοῦ ἀέρος καὶ μετὰ βίας εἰσιόντος. ὥσπερ οὖν ἐκτὸς ποιεῖ τῇ ἀφῇ τὴν αἴσθησιν, οὕτω καὶ ἐντὸς.

[56] ὀξύτατα δ' ἀκούειν, εἰ ὁ μὲν ἔξω χιτῶν εἴη πυκνός, τὰ δὲ φλεβία κενὰ καὶ ὡς μάλιστα ἄνικμα καὶ εὐτρητα κατὰ τε τὸ ἄλλο σῶμα καὶ τὴν κεφαλὴν καὶ τὰς ἀκοάς, ἔτι δὲ τὰ ὁστὰ πυκνὰ καὶ ὁ ἐγκέφαλος εὐκρατος καὶ τὸ περὶ αὐτὸν ὡς ξηρότατον· ἀθρόον γὰρ ἂν οὕτως εἰσιέναι τὴν φωνὴν ἅτε διὰ πολλοῦ κενοῦ καὶ ἀνίκμου καὶ εὐτρήτου εἰσιούσαν καὶ ταχὺ 'σκιδνασθαι' καὶ ὁμαλῶς κατὰ τὸ σῶμα καὶ οὐ διεκπίπτειν ἔξω.

[57] τὸ μὲν οὖν ἀσαφῶς ἀφορίζειν ὁμοίως ἔχει τοῖς ἄλλοις. ἄτοπον δὲ καὶ ἴδιον <τ> κατὰ πᾶν τὸ σῶμα τὸν ψόφον εἰσιέναι, καὶ ὅταν εἰσέλθῃ διὰ τῆς ἀκοῆς, διαχεῖσθαι κατὰ πᾶν, ὥσπερ οὐ ταῖς ἀκοαῖς, ἀλλ' ὅλῳ τῷ σώματι τὴν αἴσθησιν οὔσαν. οὐ γὰρ κἂν συμπάσῃ τι τῇ ἀκοῇ, διὰ τοῦτο καὶ αἰσθάνεται. πάσαις γὰρ τοῦτό γε ὁμοίως ποιεῖ, καὶ οὐ μόνον ταῖς αἰσθήσεσιν, ἀλλὰ καὶ τῇ ψυχῇ. καὶ περὶ μὲν ὅψεως καὶ ἀκοῆς οὕτως ἀποδίδωσι, τὰς δὲ ἄλλας αἰσθήσεις σχεδὸν ὁμοίως ποιεῖ τοῖς πλείστοις.

[58] περὶ δὲ τοῦ φρονεῖν ἐπὶ τοσοῦτον εἴρηκεν, ὅτι γίνεται συμμέτρως ἐχούσης τῆς ψυχῆς κατὰ τὴν κρᾶσιν· ἐὰν δὲ περίθερμός τις ἢ περίψυχρος γένηται, μεταλλάττειν φησί. διὸ καὶ τοὺς παλαιοὺς καλῶς τοῦθ' ὑπολαβεῖν, ὅτι ἐστὶν 'ἄλλοφρονεῖν'. ὥστε φανερόν, ὅτι τῇ κράσει τοῦ σώματος ποιεῖ τὸ φρονεῖν, ὅπερ ἴσως αὐτῷ καὶ κατὰ λόγον ἐστὶ σῶμα ποιοῦντι τὴν ψυχὴν. αἱ μὲν οὖν περὶ αἰσθήσεως καὶ τοῦ φρονεῖν δόξαι σχεδὸν αὗται καὶ τοσαῦται τυγχάνουσιν οὔσαι [παρὰ] τῶν πρότερον.

[59] Περὶ δὲ τῶν αἰσθητῶν, τίς ἡ φύσις καὶ ποῖον ἕκαστόν ἐστιν, οἱ μὲν ἄλλοι παραλείπουσιν. τῶν μὲν γὰρ ὑπὸ τὴν ἀφὴν περὶ βαρέος καὶ κούφου καὶ θερμοῦ καὶ ψυχροῦ λέγουσιν, οἷον ὅτι τὸ μὲν μανὸν καὶ λεπτὸν θερμόν, τὸ δὲ πυκνὸν καὶ παχὺ ψυχρόν, ὥσπερ Ἀναξαγόρας διαιρεῖ τὸν ἀέρα καὶ τὸν αἰθέρα· σχεδὸν δὲ καὶ τὸ βαρὺ καὶ τὸ κούφον τοῖς αὐτοῖς καὶ ἔτι ταῖς ἄνω καὶ

κάτω φοραῖς, καὶ πρὸς τούτοις περὶ τε φωνῆς ὅτι κίνησις τοῦ ἀέρος, καὶ περὶ ὁσμῆς ὅτι ἀπορροή τις. Ἐμπεδοκλῆς δὲ καὶ περὶ τῶν χρωμάτων καὶ ὅτι τὸ μὲν λευκὸν τοῦ πυρός, τὸ δὲ μέλαν τοῦ ὕδατος. οἱ δὲ ἄλλοι τοσοῦτον μόνον, ὅτι τὸ τε λευκὸν καὶ τὸ μέλαν ἀρχαί, τὰ δ' ἄλλα मिγνυμένων γίνεται τούτων. καὶ γὰρ Ἀναξαγόρας ἀπλῶς εἶρηκε περὶ αὐτῶν.

[60] Δημόκριτος δὲ καὶ Πλάτων ἐπὶ πλεῖστον εἰσιν ἡμμένοι, καθ' ἕκαστον γὰρ ἀφορίζουσι, πλὴν ὁ μὲν οὐκ ἀποστερῶν τῶν αἰσθητῶν τὴν φύσιν, Δημόκριτος δὲ πάντα πάθη τῆς αἰσθήσεως ποιῶν. ποτέρως μὲν οὖν ἔχει τάληθές, οὐκ ἂν εἴη λόγος. ἐφ' ὅσον δὲ ἐκάτερος ἦπται καὶ πῶς ἀφώρικε, πειραθῶμεν ἀποδοῦναι πρότερον εἰπόντες τὴν ὅλην ἔφοδον ἐκατέρου. Δημόκριτος μὲν οὖν οὐχ ὁμοίως λέγει περὶ πάντων, ἀλλὰ τὰ μὲν τοῖς μεγέθεσι, τὰ δὲ τοῖς σχήμασιν, ἓνα δὲ τάξει καὶ θέσει διορίζει. Πλάτων δὲ σχεδὸν ἅπαντα πρὸς τὰ πάθη καὶ τὴν αἴσθησιν ἀποδίδωσιν. ὥστε δόξειεν ἂν ἐκάτερος ἐναντίως τῇ ὑποθέσει λέγειν.

[61] ὁ μὲν γὰρ πάθη ποιῶν τῆς αἰσθήσεως καθ' αὐτὰ διορίζει τὴν φύσιν· ὁ δὲ καθ' αὐτὰ ποιῶν ταῖς οὐσίαις πρὸς τὰ πάθη τῆς αἰσθήσεως ἀποδίδωσι.

Βαρὺ μὲν οὖν καὶ κοῦφον τῷ μεγέθει διαιρεῖ Δημόκριτος. εἰ γὰρ διακριθεὶς καθ' ἓν ἕκαστον, εἰ καὶ κατὰ σχῆμα διαφέρει [διαφέρει], σταθμοῦ ἂν ἐπὶ μεγέθει τὴν φύσιν ἔχειν. οὐ μὴν ἀλλ' ἔν γε τοῖς μικτοῖς κουφότερον μὲν εἶναι τὸ πλεόν ἔχον κενόν, βαρύτερον δὲ τὸ ἔλαττον. ἐν ἐνίοις μὲν οὕτως εἶρηκεν.

[62] ἐν ἄλλοις δὲ κοῦφον εἶναί φησιν ἀπλῶς τὸ λεπτόν. παραπλησίως δὲ καὶ περὶ σκληροῦ καὶ μαλακοῦ. σκληρὸν μὲν γὰρ εἶναι τὸ πυκνόν, μαλακὸν δὲ τὸ μανόν, καὶ τὸ μᾶλλον δὲ καὶ ἥττον καὶ ἡμάλιστα κατὰ λόγον. διαφέρειν δέ τι τὴν θέσιν καὶ τὴν ἐναπόλησιν τῶν κενῶν τοῦ σκληροῦ καὶ μαλακοῦ καὶ βαρέος καὶ κούφου. διὸ σκληρότερον μὲν εἶναι σίδηρον, βαρύτερον δὲ μόλυβδον· τὸν μὲν γὰρ σίδηρον ἀνωμάλως συγκεῖσθαι καὶ τὸ κενὸν ἔχειν πολλαχῇ καὶ κατὰ μεγάλα, πετυκνωθῆναι δὲ κατὰ ἓνα, ἀπλῶς δὲ πλεόν ἔχειν κενόν. τὸν δὲ μόλυβδον ἔλαττον ἔχοντα κενὸν ὁμαλῶς συγκεῖσθαι «καὶ» κατὰ πᾶν ὁμοίως, διὸ βαρύτερον μὲν, μαλακώτερον δ' εἶναι τοῦ σιδήρου.

[63] περὶ μὲν «οὖν» βαρέος καὶ κούφου καὶ σκληροῦ καὶ μαλακοῦ ἐν τούτοις ἀφορίζει. τῶν δὲ ἄλλων αἰσθητῶν οὐδενὸς εἶναι φύσιν, ἀλλὰ πάντα πάθη τῆς αἰσθήσεως ἀλλοιουμένης, ἐξ ἧς γίνεσθαι τὴν φαντασίαν. οὐδὲ γὰρ τοῦ ψυχροῦ καὶ τοῦ θερμοῦ φύσιν ὑπάρχειν, ἀλλὰ τὸ σχῆμα «μεταπίπτον» ἐργάζεσθαι καὶ τὴν ἡμετέραν ἀλλοίωσιν· ὃ τι γὰρ ἂν ἄθρουν ἦ, τοῦτ'

ἐνισχύειν ἐκάστω, τὸ δ' εἰς μακρὰ διανενομημένον ἀναίσθητον εἶναι. σημεῖον δ' ὡς οὐκ εἰσὶ φύσει τὸ μὴ ταῦτ' ἀσὶ φαίνεσθαι τοῖς ζώοις, ἀλλ' ὁ ἡμῖν γλυκύ, τοῦτ' ἄλλοις πικρὸν καὶ ἑτέροις ὅξυ καὶ ἄλλοις δριμύ τοῖς δὲ στρυφνὸν καὶ τὰ ἄλλα δ' ὡσαύτως.

[64] ἔτι δ' αὐτοὺς μεταβάλλειν τῇ κράσει κατὰ τὰ πάθη καὶ τὰς ἡλικίας· ἢ καὶ φανερόν, ὡς ἡ διάθεσις αἰτία τῆς φαντασίας. ἀπλῶς μὲν οὖν περὶ τῶν αἰσθητῶν οὕτω δεῖν ὑπολαμβάνειν. οὐ μὴν ἀλλ' ὥσπερ καὶ τὰ ἄλλα καὶ ταῦτα ἀνατίθῃσι τοῖς σχήμασι· πλὴν οὐχ ἀπάντων ἀποδίδωσι τὰς μορφάς, ἀλλὰ μᾶλλον τῶν χυλῶν καὶ τῶν χρωμάτων καὶ τούτων ἀκριβέστερον διορίζει τὰ περὶ τοὺς χυλοὺς ἀναφέρων τὴν φαντασίαν πρὸς ἄνθρωπον.

[65] τὸν μὲν οὖν ὅξυν εἶναι τῷ σχήματι γωνοειδῇ τε καὶ πολυκαμπῇ καὶ μικρὸν καὶ λεπτόν. διὰ γὰρ τὴν δριμύτητα ταχὺ καὶ πάντῃ διαδύεσθαι, τραχὺν δ' ὄντα καὶ γωνοειδῇ συνάγειν καὶ συσπᾶν, διὸ καὶ θερμαίνειν τὸ σῶμα κενότητος ἐμποιοῦντα· μάλιστα γὰρ θερμαίνεσθαι τὸ πλεῖστον ἔχον κενόν. τὸν δὲ γλυκὺν ἐκ περιφερῶν συγκεῖσθαι σχημάτων <καὶ> οὐκ ἄγαν μικρῶν, διὸ καὶ διαχεῖν ὅλως τὸ σῶμα καὶ οὐ βιαίως, καὶ οὐ ταχὺ πάντα περαίνειν· τοὺς <δ> ἄλλους ταράττειν, ὅτι διαδύνων πλανᾷ τὰ ἄλλα καὶ ὑγραίνει· ὑγραινόμενα δὲ καὶ ἐκ τῆς τάξεως κινούμενα συρρεῖν εἰς τὴν κοιλίαν· ταύτην γὰρ εὐπορώτατον εἶναι διὰ τὸ πλεῖστον ἐνεῖναι κενόν.

[66] τὸν δὲ στρυφνὸν ἐκ μεγάλων σχημάτων καὶ πολυγωνίων καὶ περιφερῆς ἥκιστ' ἐχόντων· ταῦτα γὰρ ὅταν εἰς τὰ σώματα ἔλθῃ, ἐπιτυφλοῦν ἐμπλάττοντα τὰ φλεβία καὶ κωλύειν συρρεῖν, διὸ καὶ τὰς κοιλίας ἰστάναι. τὸν δὲ πικρὸν ἐκ μικρῶν καὶ λείων καὶ περιφερῶν, τὴν περιφέρειαν εἰληχότα καὶ καμπὰς ἔχουσιν· διὸ καὶ γλισχρὸν εἶναι καὶ κολλώδη. ἄλμυρον δὲ τὸν ἐκ μεγάλων καὶ οὐ περιφερῶν, ἀλλ' ἐπ' ἐνίων καὶ σκαληνῶν, διὸ οὐδὲ πολυκαμπῶν (βούλεται δὲ σκαληνὰ λέγειν, ἅπερ παράλλαξιν ἔχει πρὸς ἄλληλα καὶ συμπλοκήν)· μεγάλων μὲν, ὅτι ἡ ἄλμυρις ἐπιπολάζει· μικρὰ γὰρ ὄντα καὶ τυπτόμενα τοῖς περιέχουσι μίγνυσθαι ἂν τῷ παντί· οὐ περιφερῶν δ', ὅτι τὸ μὲν ἄλμυρον τραχύ, τὸ δὲ περιφερὲς λείον· [οὐ] σκαληνῶν δὲ διὰ τὸ μὴ περιπλάττεσθαι, διὸ ψαφαρὸν εἶναι.

[67] τὸν δὲ δριμὺν μικρὸν καὶ περιφερῇ καὶ γωνιοειδῇ, σκαληνὸν δὲ οὐκ ἔχειν. τὸν μὲν γὰρ δριμὺν πολυγώνιον ποιεῖν τῇ τραχύτητι θερμαίνειν καὶ διαχεῖν. [διὰ τὸ μικρὸν εἶναι καὶ περιφερῇ καὶ ἰσχυροειδῇ] καὶ γὰρ τὸ γωνιοειδὲς εἶναι τοιοῦτον. ὡσαύτως δὲ καὶ τὰς ἄλλας ἐκάστου δυνάμεις ἀποδίδωσιν ἀνάγων εἰς τὰ σχήματα. ἀπάντων δὲ τῶν σχημάτων οὐδὲν

ἀκέραιον εἶναι καὶ ἀμιγῆς τοῖς ἄλλοις, ἀλλ' ἐν ἐκάστω πολλὰ εἶναι καὶ τὸν αὐτὸν ἔχειν λείου καὶ τραχέος καὶ περιφεροῦς καὶ ὀξέος καὶ τῶν λοιπῶν. οὗ δ' ἂν ἐνῇ πλεῖστον, τοῦτο μάλιστα ἐνισχύειν πρὸς τε τὴν αἴσθησιν καὶ τὴν δύναμιν. ἔτι δὲ εἰς ὅποιαν ἔξιν ἂν εἰσέλθῃ, διαφέρειν [γὰρ] οὐκ ὀλίγον. καὶ διὰ τοῦτο τὸ αὐτὸ τάναντία καὶ τάναντία τὸ αὐτὸ πάθος ποιεῖν ἐνίοτε.

[68] καὶ περὶ μὲν τῶν χυλῶν οὕτως ἀφώρικεν· ἄτοπον δ' ἂν φανείη πρῶτον μὲν τὸ μὴ πάντων ὁμοίως ἀποδοῦναι τὰς αἰτίας, ἀλλὰ βαρὺ μὲν καὶ κοῦφον καὶ μαλακὸν καὶ σκληρὸν καὶ μεγέθει καὶ σμικρότητι καὶ τῷ μανῶ καὶ πυκνῶ, θερμὸν δὲ καὶ ψυχρὸν καὶ τὰ ἄλλα τοῖς σχήμασιν. ἔπειτα βαρέος μὲν καὶ κούφου καὶ σκληροῦ καὶ μαλακοῦ καθ' αὐτὰ ποιεῖν φύσεις (μέγεθος μὲν γὰρ καὶ σμικρότης καὶ τὸ πυκνὸν καὶ τὸ μανὸν οὐ πρὸς ἕτερόν ἐστι), θερμὸν δὲ καὶ ψυχρὸν καὶ τὰ ἄλλα πρὸς τὴν αἴσθησιν, καὶ ταῦτα πολλάκις λέγοντα, διότι τοῦ χυλοῦ τὸ σχῆμα σφαιροειδές.

[69] ὅλως δὲ μέγιστον ἐναντίωμα καὶ κοινὸν ἐπὶ πάντων, ἅμα μὲν πάθη ποιεῖν τῆς αἰσθήσεως, ἅμα δὲ τοῖς σχήμασι διορίζειν, καὶ τὸ αὐτὸ φαίνεσθαι τοῖς μὲν πικρόν, τοῖς δὲ γλυκὺ, τοῖς δ' ἄλλως. οὔτε γὰρ οἶόν <τε> τὸ σχῆμα πάθος εἶναι οὔτε ταῦτόν τοις μὲν σφαιροειδές, τοῖς δ' ἄλλως. ἀνάγκη δ' [εἴπερ] ἴσως, εἴπερ τοῖς μὲν γλυκὺ, τοῖς δὲ πικρόν, οὐδὲ κατὰ τὰς ἡμετέρας ἔξεις μεταβάλλειν τὰς μορφάς. ἀπλῶς δὲ τὸ μὲν σχῆμα καθ' αὐτό ἐστι, τὸ δὲ γλυκὺ καὶ ὅλως τὸ αἰσθητὸν πρὸς ἄλλο καὶ ἐν ἄλλοις, ὥς φησιν. ἄτοπον δὲ καὶ τὸ πᾶσιν ἀξιοῦν ταῦτόν φαίνεσθαι τῶν αὐτῶν αἰσθανομένοις καὶ τούτων τὴν ἀλήθειαν ἐλέγχειν, καὶ ταῦτα εἰρηκότα πρότερον τὸ τοῖς ἀνομοίως διακειμένοις ἀνόμοια καὶ πάλιν τὸ μηθὲν μᾶλλον ἕτερον ἐτέρου τυγχάνειν τῆς ἀληθείας.

[70] εἰκὸς γὰρ τὸ βέλτιον τοῦ χειρόνος καὶ τὸ ὑγιαῖνον τοῦ κάμνοντος· κατὰ φύσιν γὰρ μᾶλλον. ἔτι δὲ εἴπερ μὴ ἔστι φύσις τῶν αἰσθητῶν διὰ τὸ μὴ ταῦτά πᾶσι φαίνεσθαι, δηλὸν ὥς οὐδὲ τῶν ζώων οὐδὲ τῶν ἄλλων σωμάτων· οὐδὲ γὰρ περὶ τούτων ὁμοδοξοῦσι. καίτοι εἰ μὴ καὶ διὰ τῶν αὐτῶν γίνεται πᾶσι τὸ γλυκὺ καὶ τὸ πικρόν, ἀλλ' ἢ γε φύσις τοῦ πικροῦ καὶ τοῦ γλυκέος ἢ αὐτὴ φαίνεται πᾶσιν. ὅπερ καὶ αὐτὸς ἂν δόξειεν ἐπιμαρτυρεῖν. πῶς γὰρ ἂν τὸ ἡμῖν πικρὸν ἄλλοις ἦν γλυκὺ καὶ στρυφνόν, εἰ μὴ τις ἦν ὠρισμένη φύσις αὐτῶν;

[71] ἔτι δὲ ποιεῖ σαφέστερον, ἐν οἷς φησι γίνεσθαι μὲν ἕκαστον καὶ εἶναι κατ' ἀλήθειαν, ἰδίως δ' ἐπὶ πικροῦ 'μοῖραν ἔχειν συνέσεως'. ὥστε διὰ τε τούτων ἐναντίον ἂν φανείη τὸ μὴ ποιεῖν φύσιν τινὰ τῶν αἰσθητῶν καὶ πρὸς τούτοις, ὅπερ ἐλέχθη καὶ πρότερον, ὅταν σχῆμα μὲν ἀποδιδῶ τῆς ἰουσίας

ὥστερ καὶ τῶν ἄλλων, μὴ εἶναι δὲ λέγη φύσιν· ἥ γὰρ οὐδενὸς ὅλως ἢ καὶ τούτων ἔσται τῆς αὐτῆς γε ὑπαρχούσης αἰτίας. ἔτι δὲ τὸ θερμόν τε καὶ ψυχρόν, ἅπερ ἀρχὰς τιθέασιν, εἰκὸς ἔχειν τινὰ φύσιν, εἰ δὲ ταῦτα καὶ τὰ ἄλλα. νῦν δὲ σκληροῦ μὲν καὶ μαλακοῦ καὶ βαρέος καὶ κούφου ποιεῖ τιν' οὐσίαν, ἅπερ οὐχ ἦττον ἔδοξε λέγεσθαι πρὸς ἡμᾶς, θερμοῦ δὲ καὶ ψυχροῦ καὶ τῶν ἄλλων οὐδενός. καίτοι τό γε βαρὺ καὶ κούφον ὅταν διορίξῃ τοῖς μεγέθεσιν, ἀνάγκη τὰ ἀπλᾶ πάντα τὴν αὐτὴν ἔχειν ὁρμὴν τῆς φορᾶς, ὥστε μιᾶς τινος ἂν ὕλης εἴη καὶ τῆς αὐτῆς φύσεως.

[72] ἀλλὰ περὶ μὲν τούτων ἔοικε συνηκολουθηκέναι τοῖς ποιοῦσιν ὅλως τὸ φρονεῖν κατὰ τὴν ἀλλοίωσιν, ἥπερ ἐστὶν ἀρχαιοτάτη δόξα. πάντες γὰρ οἱ παλαιοὶ καὶ [οἱ] ποιηταὶ καὶ σοφοὶ κατὰ τὴν διάθεσιν ἀποδιδόασιν τὸ φρονεῖν. τῶν δὲ χυλῶν ἐκάστω τὸ σχῆμα ἀποδίδωσι πρὸς τὴν δύναμιν ἀφομοιωὺν τὴν ἐν τοῖς πάθεσιν· ὅπερ οὐ μόνον ἐξ ἐκείνων, ἀλλὰ καὶ ἐκ τῶν αἰσθητηρίων ἔδει συμβαίνειν ἄλλως τε καὶ εἰ πάθη τούτων ἐστίν. οὐ γὰρ πᾶν τὸ σφαιροειδὲς οὐδὲ τὰ ἄλλα σχήματα τὴν αὐτὴν ἔχει δύναμιν, ὥστε κατὰ τὸ [κάτω] ὑποκείμενον ἔδει διορίζειν, πότερον ἐξ ὁμοίων ἢ ἐξ ἀνομοίων ἐστὶ καὶ πῶς ἢ τῶν αἰσθήσεων ἀλλοίωσις γίνεται, καὶ πρὸς τούτοις ὁμοίως ἐπὶ πάντων ἀποδοῦναι τῶν διὰ τῆς ἀφῆς καὶ μὴ μόνον τὰ περὶ γεῦσιν. ἀλλὰ καὶ ταῦτα μὲν ἦτοι διαφορὰν τινὰ ἔχει πρὸς τοὺς χυλοὺς, ἦν ἔδει διελεῖν, ἢ καὶ παρεῖται δυνατόν ὃν ὁμοίως εἰπεῖν.

[73] τῶν δὲ χρωμάτων ἀπλᾶ μὲν λέγει τέτταρα. λευκὸν μὲν οὖν εἶναι τὸ λεῖον. ὁ γὰρ ἂν μὴ τραχὺ μηδ' ἐπισκιάζῃ μηδὲ δυσδιόδον ἦ, τοιοῦτον πᾶν λαμπρὸν εἶναι. δεῖ δὲ καὶ εὐθύτρυπα καὶ διαυγῇ τὰ λαμπρὰ εἶναι. τὰ μὲν οὖν σκληρὰ τῶν λευκῶν ἐκ τοιούτων σχημάτων συγκεῖσθαι οἶον ἢ ἐντὸς πλᾶξ τῶν κογχυλίων· οὕτω γὰρ ἂν ἄσκια καὶ εὐαγῇ καὶ εὐθύπορα εἶναι. τὰ <δὲ> ψαθυρὰ καὶ εὐθρυπτα ἐκ περιφερῶν μὲν λοξῶν δὲ τῇ θέσει πρὸς ἄλληλα καὶ κατὰ δύο συζεύξει, τὴν δ' ὅλην τάξιν ἔχειν ὅτι μάλιστα ὁμοίαν. τοιούτων δ' ὄντων ψαθυρὰ μὲν εἶναι, διότι κατὰ μικρὸν ἢ σύναψις· εὐθρυπτα δ', ὅτι ὁμοίως κεῖνται· ἄσκια δέ, διότι λεῖα καὶ πλατέα· λευκότερα δ' ἀλλήλων τῷ τὰ σχήματα τὰ εἰρημένα καὶ ἀκριβέστερα καὶ ἀμιγέστερα εἶναι καὶ τὴν τάξιν καὶ τὴν θέσιν ἔχειν μᾶλλον τὴν εἰρημένην.

[74] τὸ μὲν οὖν λευκὸν ἐκ τοιούτων εἶναι σχημάτων. τὸ δὲ μέλαν ἐκ τῶν ἐναντίων, ἐκ τραχέων καὶ σκαληνῶν καὶ ἀνομοίων· οὕτω γὰρ ἂν σκιάζειν καὶ οὐκ εὐθεῖς εἶναι τοὺς πόρους οὐδ' εὐδιόδους. ἔτι δὲ τὰς ἀπορροίας νωθεῖς καὶ παραχώδεις· διαφέρειν γάρ τι καὶ τὴν ἀπορροὴν τῷ ποιᾶν εἶναι πρὸς τὴν

φαντασίαν, ἥν γίνεσθαι διὰ τὴν ἐναπόληψιν τοῦ ἀέρος ἀλλοίαν.

[75] ἐρυθρόν δ' ἐξ οἶωνπερ καὶ τὸ θερμόν, πλὴν ἐκ μειζόνων. ἐὰν γὰρ αἱ συγκρίσεις ὥσι μείζους ὁμοίων ὄντων τῶν σχημάτων μᾶλλον ἐρυθρόν εἶναι. σημεῖον δ' ὅτι ἐκ τοιούτων τὸ ἐρυθρόν· ἡμᾶς τε γὰρ θερμαινομένου ἐρυθραίνεσθαι καὶ τὰ ἄλλα τὰ πυρούμενα, μέχρις ἂν οὗ ἔχη τὸ τοῦ πυροειδοῦς. ἐρυθρότερα δὲ τὰ ἐκ μεγάλων ὄντα σχημάτων οἶον τὴν φλόγα καὶ τὸν ἄνθρακα τῶν χλωρῶν ξύλων ἢ τῶν αὐῶν, καὶ τὸν σίδηρον δὲ καὶ τὰ ἄλλα τὰ πυρούμενα· λαμπρότατα μὲν γὰρ εἶναι τὰ πλείστον ἔχοντα καὶ λεπτότατον πῦρ, ἐρυθρότερα δὲ τὰ παχύτερον καὶ ἔλαττον. διὸ καὶ ἥττον εἶναι θερμὰ τὰ ἐρυθρότερα· θερμόν [μὲν] γὰρ τὸ λεπτόν. τὸ δὲ χλωρόν ἐκ τοῦ στερεοῦ καὶ τοῦ κενοῦ συνεστάναι †μεγάλων ἐξ ἀμφοῖν, τῇ θέσει δὲ καὶ τάξει αὐτῶν τὴν χροάν.

[76] τὰ μὲν οὖν ἀπλᾶ χρώματα τούτοις κεκρῆσθαι τοῖς σχήμασιν· ἕκαστον δὲ καθαρώτερον, ὅσῳ ἂν ἐξ ἀμιγεστέρων ᾖ. τὰ δὲ ἄλλα κατὰ τὴν τούτων μῖξιν· οἶον τὸ μὲν χρυσοειδὲς καὶ τὸ τοῦ χαλκοῦ καὶ πᾶν τὸ τοιοῦτον ἐκ τοῦ λευκοῦ καὶ τοῦ ἐρυθροῦ· τὸ μὲν γὰρ λαμπρόν ἔχειν ἐκ τοῦ λευκοῦ, τὸ δὲ ὑπέρυθρον ἀπὸ τοῦ ἐρυθροῦ· πίπτειν γὰρ εἰς τὰ κενὰ τοῦ λευκοῦ τῇ μίξει τὸ ἐρυθρόν. ἐὰν δὲ προστεθῇ τούτοις τὸ χλωρόν, γίνεσθαι τὸ κάλλιστον χρῶμα, δεῖν δὲ μικρὰς τοῦ χλωροῦ τὰς συγκρίσεις εἶναι· μεγάλας γὰρ οὐχ οἷόν τε συγκεκριμένων οὕτω τοῦ λευκοῦ καὶ τοῦ ἐρυθροῦ. διαφοροὺς δὲ ἔσσεσθαι τὰς χροάς τῷ πλέον καὶ ἔλαττον λαμβάνειν.

[77] τὸ δὲ πορφυροῦν ἐκ λευκοῦ καὶ μέλανος καὶ ἐρυθροῦ, πλείστην μὲν μοῖραν ἔχοντος τοῦ ἐρυθροῦ, μακρὰν δὲ τοῦ μέλανος, μέσην δὲ τοῦ λευκοῦ· διὸ καὶ ἡδὺ φαίνεσθαι πρὸς τὴν αἴσθησιν. ὅτι μὲν οὖν τὸ μέλαν καὶ τὸ ἐρυθρόν αὐτῷ ἐνυπάρχει, φανερόν εἶναι τῇ ὄψει, διότι δὲ τὸ λευκόν, τὸ λαμπρόν καὶ διανγὲς σημαίνειν· ταῦτα γὰρ ποιεῖν τὸ λευκόν. τὴν δ' ἴσατιν ἐκ μέλανος σφόδρα καὶ χλωροῦ, πλείονα δὲ μοῖραν ἔχειν τοῦ μέλανος· τὸ δὲ πράσινον ἐκ πορφυροῦ καὶ τῆς ισάτιδος, ἢ ἐκ χλωροῦ καὶ πορφυροειδοῦς. τὸ γὰρ θεῖον εἶναι τοιοῦτον καὶ μετέχειν τοῦ λαμπροῦ. τὸ δὲ κυανοῦν ἐξ ισάτιδος καὶ πυρώδους, σχημάτων δὲ περιφερῶν καὶ βελονοειδῶν, ὅπως τὸ στίλβον τῷ μέλανι ἐνῇ.

[78] τὸ δὲ καρύινον ἐκ χλωροῦ καὶ κυανοειδοῦς. ἐὰν δὲ †χλωρόν μιχθῇ, φλογοειδὲς γίνεσθαι, τὸ γὰρ ἄσκιον καὶ μελανόχρων ἐξείργεσθαι. σχεδὸν δὲ καὶ τὸ ἐρυθρόν τῷ λευκῷ μιχθὲν <τὸ> χλωρόν ποιεῖν εὐαγὲς καὶ οὐ μέλαν· διὸ καὶ τὰ φυόμενα χλωρὰ τὸ πρῶτον εἶναι πρὸ τοῦ θερμανθῆναι καὶ †διαχεῖσθαι.

καὶ πλήθει μὲν τοσούτων ἐπιμένηται χρωμάτων, ἅπειρα δὲ εἶναι καὶ τὰ χρώματα καὶ τοὺς χυλοὺς κατὰ τὰς μίξεις, ἐάν τις τὰ μὲν ἀφαιρῇ, τὰ δὲ προστιθῇ, καὶ τῶν μὲν ἔλαττον μίση, τῶν δὲ πλεῖον. οὐθὲν γὰρ ὅμοιον ἔσσεσθαι θάτερον θατέρω.

[79] Πρῶτον μὲν οὖν τὸ πλείους ἀποδοῦναι τὰς ἀρχὰς ἔχει τινὰ ἀπορίαν· οἱ γὰρ ἄλλοι τὸ λευκὸν καὶ τὸ μέλαν ὡς τούτων ἀπλῶν ὄντων μόνων. ἔπειτα τὸ μὴ πᾶσι τοῖς λευκοῖς μίαν ποιῆσαι τὴν μορφήν, ἀλλ' ἑτέραν τοῖς σκληροῖς καὶ τοῖς ψαθυροῖς. εἰ γὰρ εἰκὸς ἄλλην αἰτίαν εἶναι τοῖς διαφοροῖς κατὰ τὴν ἀφήν, οὐ δ' ἂν ἔτι τὸ σχῆμα αἴτιον εἴη τῆς διαφορᾶς, ἀλλὰ μᾶλλον ἢ θέσις· ἐνδέχεται γὰρ καὶ τὰ περιφερῇ καὶ ἀπλῶς πάντα ἐπισκιάζειν ἑαυτοῖς. σημεῖον δέ· καὶ γὰρ αὐτὸς ταύτην φέρει τὴν πίστιν, ὅσα τῶν λείων μέλανα φαίνεται· διὰ γὰρ τὴν σύμφυσιν καὶ τὴν τάξιν ὡς τὴν αὐτὴν ἔχοντα τῷ μέλανι φαίνεσθαι τοιαῦτα. καὶ πάλιν ὅσα λευκὰ τῶν τραχέων· ἐκ μεγάλων γὰρ εἶναι ταῦτα καὶ τὰς συνδέσεις οὐ περιφερεῖς, ἀλλὰ 'προκρόσσας' καὶ τῶν σχημάτων τὰς μορφὰς ἀγνυμένας, ὥσπερ ἡ ἀνάβασις καὶ τὰ πρὸ τῶν τειχῶν ἔχει χώματα· τοιοῦτον γὰρ ὃν ἄσκιον εἶναι καὶ οὐ κωλύεσθαι τὸ λαμπρόν.

[80] πρὸς δὲ τούτοις πῶς λέγει καὶ ζῶων τὸ λευκὸν ἐνίων γίνεσθαι μέλαν, εἰ τεθεῖησαν οὕτως, ὥστ' ἐπισκιάζειν; ὅλως δὲ τοῦ διαφανοῦς καὶ τοῦ λαμπροῦ μᾶλλον ἔοικε τὴν φύσιν ἢ τοῦ λευκοῦ λέγειν. τὸ γὰρ εὐδίοπτον εἶναι καὶ μὴ ἐπαλλάττειν τοὺς πόρους τοῦ διαφανοῦς· ἥ ἐπὶ πόσα δὲ λευκὰ τοῦ διαφανοῦς. ἔτι δὲ τὸ μὲν εὐθεῖς εἶναι τῶν λευκῶν τοὺς πόρους, τῶν δὲ μελάνων ἐπαλλάττειν, ὡς εἰσιούσης τῆς φύσεως ὑπολαβεῖν ἔστιν· ὁρᾶν δὲ φησι διὰ τὴν ἀπορροὴν καὶ τὴν ἔμφασιν τὴν εἰς τὴν ὄψιν· εἰ δὲ τοῦτό ἐστι, τί διοίσει τοὺς πόρους κεῖσθαι κατ' ἀλλήλους ἢ ἐπαλλάττειν; οὐδὲ τὴν ἀπορροὴν ἀπὸ τοῦ κενοῦ πῶς γίνεσθαι ῥάδιον ὑπολαβεῖν· ὥστε λεκτέον τούτου τὴν αἰτίαν. ἔοικε γὰρ ἀπὸ τοῦ φωτὸς ἢ ἀπὸ ἄλλου τινὸς ποιεῖν τὸ λευκόν. [διὸ καὶ τὴν παχύτητα τοῦ ἀέρος αἰτιᾶται πρὸς τὸ φαίνεσθαι μέλαν.]

[81] ἔτι δὲ πῶς τὸ μέλαν ἀποδίδωσιν, οὐ ῥάδιον καταμαθεῖν· ἡ σκιά γὰρ μέλαν τι καὶ ἐπιπρόσθησίς ἐστι τοῦ λευκοῦ· διὸ πρῶτον τὸ λευκὸν τὴν φύσιν. ἅμα δὲ οὐ μόνον τὸ ἐπισκιάζειν, ἀλλὰ καὶ τὴν παχύτητα τοῦ ἀέρος καὶ τῆς εἰσιούσης ἀπορροῆς αἰτιᾶται καὶ τὴν ταραχὴν τοῦ ὀφθαλμοῦ. πότερον δὲ ταῦτα συμβαίνει διὰ τὸ μὴ εὐδίοπτον ἢ καὶ ἄλλω γίνοιτ' ἂν καὶ ποίω [ἢ μέλαν], οὐ διασαφεῖ.

[82] ἄτοπον δὲ καὶ τὸ τοῦ χλωροῦ μὴ ἀποδοῦναι μορφήν, ἀλλὰ μόνον ἐκ τοῦ στερεοῦ καὶ τοῦ κενοῦ ποιεῖν. κοινὰ γὰρ ταῦτά γε πάντων καὶ ἐξ ὁποίων οὖν

ἔσται σχημάτων. χρῆν δ' ὥσπερ κὰν τοῖς ἄλλοις ἰδίον τι ποιῆσαι, καὶ εἰ μὲν ἐναντίον τῷ ἐρυθρῷ, καθάπερ τὸ μέλαν τῷ λευκῷ, τὴν ἐναντίαν ἔχειν μορφήν· εἰ δὲ μὴ ἐναντίον, αὐτὸ τοῦτ' ἂν τις θαυμάσειεν, ὅτι τὰς ἀρχὰς οὐκ ἐναντίας ποιεῖ· δοκεῖ γὰρ ἐν πᾶσιν οὕτω. μάλιστα δ' ἐχρῆν τοῦτο διακριβοῦν, ποῖα τῶν χρωμάτων ἀπλᾶ καὶ διὰ τί τὰ μὲν σύνθετα, τὰ δὲ ἀσύνθετα· πλείστη γὰρ ἀπορία περὶ τῶν ἀρχῶν. ἀλλὰ τοῦτο μὲν ἴσως χαλεπόν. ἐπεὶ καὶ τῶν χυμῶν εἰ τις δύναιτο τοὺς ἀπλοὺς ἀποδοῦναι, μᾶλλον ἂν ὅδε λέγοι. περὶ δὲ ὁσμῆς προσαφορίζειν παρήκεν πλὴν τοσοῦτον, ὅτι τὸ λεπτὸν ἀπορρέον ἀπὸ τῶν βαρέων ποιεῖ τὴν ὁδμήν. ποῖον δὲ τι τὴν φύσιν ὃν ὑπὸ τίνος πάσχει, οὐκέτι προσέθηκεν, ὅπερ ἴσως ἦν κυριώτατον. Δημόκριτος μὲν οὖν οὕτως ἔνια παραλείπει.

[83] Πλάτων δὲ θερμὸν μὲν εἶναι φησι τὸ διακρίνον δι' ὀξύτητα τῶν γωνιῶν· ψυχρὸν δὲ ὅταν δι' ὑγρότητα ἐκκρίνοντα τὰ ἐλάττω καὶ μὴ δυνάμενα εἰσιέναι τὰ μεῖζω κύκλῳ περιωθῇ· τῇ γὰρ μάχῃ τρόμον καὶ τῷ πάθει ῥίγος εἶναι ὄνομα. σκληρὸν <δέ>, ᾧ ἂν ἡ σὰρξ ὑπεῖκη, μαλακὸν δέ, ὃ ἂν τῇ σαρκί, καὶ πρὸς ἄλληλα ὁμοίως. ὑπεῖκειν δὲ τὸ μικρὰν ἔχον βάσιν. βαρὺ δὲ καὶ κοῦφον τῷ μὲν ἄνω καὶ κάτω διορίζειν οὐ δεῖν, οὐ γὰρ εἶναι τοιούτων φύσιν· ἀλλὰ κοῦφον μὲν εἶναι τὸ εἰς τὸν παρὰ φύσιν τόπον ῥαδίως ἐλκόμενον, βαρὺ δὲ τὸ χαλεπῶς. τραχὺ δὲ καὶ λειὸν ὡς ἱκανῶς ὄντα φανερὰ παραλείπει καὶ οὐ λέγει.

[84] ἡδὺ δὲ καὶ λυπηρόν, τὸ μὲν εἰς φύσιν ἀθρόον πάθος, τὸ δὲ παρὰ φύσιν καὶ βίᾳ [λυπηρόν], τὰ δὲ μέσα καὶ ἀναίσθητα ἀνὰ λόγον. διὸ καὶ κατὰ τὸ ὁρᾶν οὐκ εἶναι λύπην οὐδ' ἡδονὴν τῇ διακρίσει καὶ συγκρίσει. περὶ δὲ χυμῶν ἐν μὲν τοῖς περὶ ὕδατος τέτταρα λέγει ὕδατος εἶδη· ἐν χυλοῖς μὲν οἶνον ὁπὸν ἔλαιον μέλι, ἐν δὲ τοῖς πάθεσι τὸν γεώδη χυμὸν· καὶ διὰ ταῦτα συνάγοντα τοὺς χυμοὺς καὶ συγκρίνοντα τὰ μὲν τραχύτερα στρυφνὰ εἶναι, τὰ δὲ ἥττον αὐστηρά. τὸ δὲ ῥυπτικὸν τῶν πόρων καὶ ἀποκαθαρτικὸν ἀλμυρόν· τὸ δὲ σφόδρα ῥυπτικόν, ὥστε καὶ ἐκτῆκειν, πικρόν. τὰ δὲ θερμαινόμενα καὶ ἄνω φερόμενα καὶ διακρίνοντα δριμέα· τὰ δὲ κυκῶντα ὀξέα· τὰ δὲ σὺν τῇ ὑγρότητι τῇ ἐν τῇ γλώττῃ καὶ διαχυτικὰ καὶ συστατικὰ εἰς τὴν φύσιν γλυκέα.

[85] τὰς δὲ ὁσμάς εἶδη μὲν οὐκ ἔχειν, ἀλλὰ τῷ λυπηρῷ καὶ ἡδεῖ διαφέρειν. εἶναι δὲ τὴν ὁσμὴν ὕδατος μὲν λεπτότερον, ἀέρος δὲ παχύτερον. σημεῖον δὲ ὅτι ὅταν ἐπιφράζαντες ἀνασπῶσιν, ἄνευ ὁσμῆς τὸ πνεῦμα εἰσέρχεται· διὸ καθάπερ καπνὸν καὶ ὁμίχλην εἶναι τῶν σωμάτων ἀόρατον. εἶναι δὲ καπνὸν μὲν μεταβολὴν ἐξ ὕδατος εἰς ἀέρα, ὁμίχλην δὲ τὴν ἐξ ἀέρος εἰς ὕδωρ. φωνὴν δὲ εἶναι πληγὴν ὑπὸ ἀέρος ἐγκεφάλου καὶ αἵματος δι' ὧτων μέχρι ψυχῆς·

ὀξείαν δὲ καὶ βαρεῖαν τὴν ταχεῖαν καὶ βραδεῖαν· συμφωνεῖν δ', ὅταν ἡ ἀρχὴ τῆς βραδείας ὁμοία ᾖ τῇ τελευτῇ τῆς ταχείας.

[86] τὸ δὲ χρῶμα φλόγα εἶναι ἀπὸ τῶν σωμάτων σύμμετρα μόρια ἔχουσιν τῇ ὄψει· λευκὸν μὲν τὸ διακριτικόν, μέλαν δὲ τὸ συγκριτικόν ἀνὰ λόγον [δὲ] τοῖς περὶ τὴν σάρκα θερμοῖς καὶ ψυχροῖς καὶ τοῖς περὶ τὴν γλῶσσαν στρυφνοῖς καὶ δριμέσι, λαμπρὸν δὲ τὸ πυρῶδες λευκόν, τὰ δὲ ἄλλα ἐκ τούτων· ἐν οἷς δὲ λόγοις, οὐδ' εἴ τις εἰδείῃ χρῆναι λέγειν φησίν, ὣν οὐκ ἔχομεν εἰκότα λόγον ἢ ἀναγκαῖον· οὐδ' εἰ πειρωμένῳ μὴ γίγνοιτο, οὐθὲν ἄτοπον, ἀλλὰ τὸν θεὸν δύνασθαι τοῦτο δρᾶν. ἃ μὲν οὖν εἶρηκε καὶ πῶς ἀφώρικε, σχεδὸν ταῦτά ἐστιν.

[87] Ἄτοπον δὲ καὶ τοῦτο· πρῶτον μὲν τὸ μὴ πάντα ὁμοίως ἀποδοῦναι μηδὲ ὅσα τοῦ αὐτοῦ γένους. ὀρίσας γὰρ τὸ θερμὸν σχήματι τὸ ψυχρὸν οὐχ ὡσαύτως ἀπέδωκεν. ἔπειτ' εἰ μαλακὸν τὸ ὑπεῖκον, φανερόν ὅτι τὸ ὕδωρ καὶ ὁ ἀήρ καὶ τὸ πῦρ ἐστὶ μαλακά· φησὶ γὰρ ὑπέικειν τὸ μικρὰν ἔχον βάσιν, ὥστε τὸ πῦρ ἂν εἴη μαλακώτατον. δοκεῖ δὲ τούτων οὐθὲν οὐδ' ὅλως τὸ μὴ ἀντιμεθιστάμενον εἶναι μαλακόν, ἀλλὰ τὸ εἰς τὸ βάθος ὑπεῖκον ἄνευ μεταστάσεως.

[88] ἔτι δὲ τὸ βαρὺ καὶ κοῦφον οὐχ ἀπλῶς, ἀλλ' ἐπὶ τῶν γεωδῶν ἀφώρικε· τούτων γὰρ δοκεῖ τὸ μὲν βαρὺ χαλεπῶς, τὸ δὲ κοῦφον ῥᾶον ἄγεσθαι πρὸς ἀλλότριον τόπον· τὸ δὲ πῦρ καὶ ὁ ἀήρ ταῖς εἰς τοὺς οἰκείους τόπους φοραῖς κοῦφα καὶ ἔστι καὶ δοκεῖ. διόπερ οὐκ ἔσται τὸ μὲν ἔλαττον τῶν ὁμογενῶν ἔχον βαρὺ, τὸ δὲ πλεῖον κοῦφον· τὸ μὲν γὰρ πῦρ ὅσῳ ἂν ᾖ πλεῖον, κουφότερον, ἀλλ' ἄνω μὲν τιθεμένου τοῦ πυρὸς ἐφαρμόσουσιν οἱ λόγοι καὶ οὗτος κάκεῖνος, ἐνταῦθα δ' οὐδέτερος. ὡσαύτως δὲ καὶ ἐπὶ τῆς γῆς· ἄνωθεν γὰρ δεῦρο θάπτον οἰσθήσεται τὸ πλεόν. ὥστε οὐχ ἀπλῶς ἡ γῆ καὶ τὸ πῦρ ἐστὶ τὸ μὲν βαρὺ τὸ δὲ κοῦφον, ἀλλ' ἐκάτερον πρὸς τὸν τόπον· οὐδ' ὁμοίως ἐνταῦθα καὶ τὸ γεῶδες, ἀλλ' ἀνάπαλιν· ἐνταῦθα μὲν τὸ ἔλαττον, ἐκεῖ δὲ τὸ πλεόν ἔχον τῶν ὁμογενῶν κουφότερον.

[89] ταῦτα δὲ πάντα συμβαίνει διὰ τὸ μὴ ἀπλῶς περὶ κούφου καὶ βαρέος, ἀλλὰ περὶ τοῦ γεώδους ἀφορίζειν. τῶν δὲ χυλῶν τὰς μὲν φύσεις οὐ λέγει τις ἕκαστος, εἰ ἄρα τέσσαρες αἱ πᾶσαι διαφοραί, τὰ δὲ πάθη τὰ συμβαίνοντα ἀπ' αὐτῶν δηλοῖ. συνάγειν γὰρ τοὺς πόρους τὸ στρυφνὸν ἢ στυπτικὸν καὶ καθαίρειν τὸ ἀλμυρόν, ὅπερ πάθος ἐστὶν ἡμέτερον· ὁμοίως δὲ καὶ τὰ ἄλλα. ζητοῦμεν δὲ τὴν οὐσίαν μᾶλλον καὶ διὰ τί ταῦτα δρῶσιν, ἐπεὶ τά γε πάθη θεωροῦμεν.

[90] ἀπορήσειε δ' ἂν τις καὶ περὶ τῶν ὁσμητῶν εἰ ἔστιν εἶδη· καὶ γὰρ τοῖς πάθεσι καὶ ταῖς ἡδοναῖς διαφέρουσιν, ὥσπερ οἱ χυλοί. καὶ ἅμα δόξειεν ἂν ὁμοίως ἔχειν ἐπὶ πάντων. περὶ δὲ τῆς ὁσμῆς ὅτι μὲν ἀπορροή τις ἐστὶ καὶ ἀνάπνευστις τοῦ ἀέρος, σχεδὸν ὁμολογεῖται. τὸ δὲ ἀφομοιοῦν καπνῷ καὶ ὁμίχλῃ ταυτὰ τε λέγειν οὐκ ἀληθές. οὐδὲ γὰρ αὐτὸς φαίνεται ποιεῖν· τὸν μὲν γὰρ ἐξ ὕδατος εἰς ἀέρα, τὴν δ' ὁμίχλην ἐξ ἀέρος εἰς ὕδωρ λέγει μεταβάλλειν. καίτοι δοκεῖ γ' ἀνάπαλιν ἔχειν ἐπὶ τῆς ὁμίχλης, διὸ καὶ παύεται τὰ ὕδατα γινομένης ὁμίχλης.

[91] ἐνδεεστέως <δὲ> καὶ ὁ τῆς φωνῆς εἴρηται λόγος· οὔτε γὰρ κοινὸς ἅπασιν τοῖς ζῴοις ἐστὶν οὔτε τὴν αἰτίαν λέγει τῆς αἰσθήσεως βουλόμενος. ἔτι δὲ οὐ τὸν ψόφον καὶ τὴν φωνήν, ἀλλὰ τὴν ἡμετέραν αἴσθησιν ἔοικεν ἀφορίζειν. περὶ δὲ χρωμάτων σχεδὸν ὁμοίως Ἐμπεδοκλεῖ λέγει· τὸ γὰρ σύμμετρα ἔχειν μόρια τῇ ὥσκει τῷ τοῖς πόροις ἐναρμόττειν ἐστίν. ἄτοπον δὲ τὸ μόνην ταύτην ἀποδιδόναι τῶν αἰσθήσεων· ἔτι δὲ τὸ ἀπλῶς τὸ χρῶμα φλόγα λέγειν· τὸ μὲν γὰρ λευκὸν ἔχει τινὰ ὁμοιότητα, τὸ δὲ μέλαν ἐναντίον ἂν φανείη. τὴν δὲ τῶν ἄλλων μῖξιν †τὸ ἀφαιρεῖν ὅλως οὐκ ἐνδέχεται ἀποδοῦναι ταῖς αἰτίαις, δεῖται δὲ τινος λόγου καὶ πίστεως.

De lapidibus

[1] Τῶν ἐν τῇ γῇ συνισταμένων τὰ μὲν ἐστὶν ὕδατος, τὰ δὲ γῆς. ὕδατος μὲν τὰ μεταλλεύόμενα καθάπερ ἄργυρος καὶ χρυσὸς καὶ τᾶλλα, γῆς δὲ λίθος τε καὶ ὅσα λίθων εἶδη περιττότερα, καὶ εἴ τινες δὴ τῆς γῆς αὐτῆς ιδιώτεραι φύσεις εἰσὶν ἢ χρώμασιν ἢ λειότησιν ἢ πυκνότησιν ἢ καὶ ἄλλῃ τινὶ δυνάμει. περὶ μὲν οὖν τῶν μεταλλευομένων ἐν ἄλλοις [2]θεθεώρηται· περὶ δὲ τούτων νῦν λέγωμεν. ἅπαντα οὖν ταῦτα χρὴ νομίζειν ὡς ἀπλῶς εἰπεῖν ἐκ καθαρᾶς τινος συνεστάναι καὶ ὁμαλῆς ὕλης, εἴτε συρροῆς εἴτε διηθήσεως τινος γινομένης, εἴτε ὡς ἀνωτέρω εἴρηται καὶ κατ' ἄλλον τρόπον ἐκκεκριμένης· τάχα γὰρ ἐνδέχεται τὰ μὲν οὕτως, τὰ δ' ἐκείνως, τὰ δ' ἄλλως. ἀφ' ὧν δὴ καὶ τὸ λεῖον καὶ τὸ πυκνὸν καὶ τὸ στιλπνὸν καὶ διαφανὲς καὶ τᾶλλα τὰ τοιαῦτα ἔχουσι, καὶ ὅσῳ ἂν καὶ ὁμαλεστέρων καὶ καθαρωτέρων ἕκαστον ἢ τοσοῦτῳ καὶ ταῦτα μᾶλλον ὑπάρχει. τὸ γὰρ ὅλον ὡς ἂν ἀκριβεῖας ἔχῃ τὰ κατὰ τὴν [3]σύστασιν ἢ πῆξιν οὕτως ἀκολουθεῖ καὶ τὰ ἀπ' ἐκείνων. ἡ δὲ πῆξις τοῖς μὲν ἀπὸ θερμοῦ τοῖς δ' ἀπὸ ψυχροῦ γίνεται. κωλύει γὰρ ἴσως οὐδὲν ἔνια γένῃ λίθων ὅφ' ἐκατέρων συνίστασθαι τούτων. ἐπεὶ τὰ γε τῆς γῆς ἅπαντα δόξειεν ἂν ὑπὸ πυρός· ἐπεὶ περ ἐν τοῖς ἐναντίοις ἐκάστων ἡ πῆξις καὶ ἡ τῆξις. ιδιότητες δὲ πλείους εἰσὶν ἐν τοῖς λίθοις· ἐν γὰρ τῇ γῇ χρώμασί τε καὶ γλισχρότητι καὶ λειότητι καὶ πυκνότητι [4] καὶ τοῖς τοιούτοις αἱ πολλαὶ διαφοραί, κατὰ δὲ τὰ ἄλλα σπάνιοι. τοῖς δὲ λίθοις αἱ τ' αὐταὶ καὶ πρὸς ταῖς τοιαύταις αἱ κατὰ τὰς δυνάμεις τοῦ τε ποιεῖν ἢ πάσχειν καὶ τοῦ μὴ πάσχειν. τηκτοὶ γὰρ οἱ δ' ἄτηκτοι, καὶ καυστοὶ οἱ δ' ἄκαυστοι, καὶ ἄλλα τούτοις ὅμοια, καὶ ἐν αὐτῇ τῇ καύσει καὶ πυρώσει πλείους ἔχοντες διαφοράς. ἔνιοι δὲ τοῖς χρώμασιν ἐξομοιοῦσθαι δύνανται τὸ ὕδωρ ὥσπερ ἡ σμάραγδος, οἱ δ' ὅλως ἀπολιθοῦν τὰ τιθέμενα εἰς ἑαυτούς, ἔτεροι δ' ὀλκὴν τινα ποιεῖν, οἱ δὲ βασανίζουσιν τὸν χρυσὸν καὶ τὸν ἄργυρον ὥσπερ ἡ τε καλουμένη λίθος Ἡρακλεία [5] καὶ ἡ Λυδὴ. θαυμασιωτάτη δὲ καὶ μεγίστη δύναμις, εἴπερ ἀληθές, ἡ τῶν τικόντων· γνωριμωτέρα δὲ τούτων καὶ ἐν πλείοσιν (ἢ) κατὰ τὰς ἐργασίας· γλυπτοὶ γὰρ ἔνιοι καὶ τορνευτοὶ καὶ πριστοί, τῶν δὲ οὐδὲ ὅλως ἄπτεται σιδήριον, ἐνίων δὲ κακῶς καὶ μόλις. εἰσὶ δὲ πλείους [6] καὶ ἄλλαι κατὰ ταύτας «διαφοραί». αἱ μὲν οὖν κατὰ τὰ χρώματα καὶ τὰς σκληρότητας καὶ μαλακότητας καὶ λειότητας καὶ τᾶλλα τὰ τοιαῦτα, δι' ὧν τὸ περιττόν, πλείοσιν ὑπάρχουσι καὶ ἐνίοις γε κατὰ τόπον ὅλον. ἐξ ὧν δὴ καὶ διωνομασμένα λιθοτομίαι Παρίων τε καὶ Πεντελικῶν καὶ Χίων τε καὶ Θηβαϊκῶν, καὶ ὡς ὁ περὶ Αἴγυπτον ἐν Θήβαις

ἀλαβαστρίτης, — καὶ γὰρ οὗτος μέγας τέμνεται, — καὶ ὁ τῷ ἐλέφαντι ὅμοιος ὁ χερνίτης καλούμενος, ἐν ᾗ πυέλῳ φασὶ καὶ Δαρεῖον κεῖσθαι· [7] καὶ ὁ πόρος ὅμοιος τῷ χρώματι καὶ τῇ πυκνότητι τῷ Παρίῳ τὴν δὲ κουφότητα μόνον ἔχων τοῦ πόρου, διὸ καὶ ἐν τοῖς σπουδαζομένοις οἰκήμασιν ὥσπερ διάζωμα τιθέασιν αὐτὸν οἱ Αἰγύπτιοι· καὶ μέλας αὐτόθι διαφανὴς ὁμοίως τῷ Χίῳ, καὶ παρ' ἄλλοις δὲ ἕτεροι πλείους, αἱ μὲν οὖν τοιαῦται διαφοραὶ καθάπερ ἐλέγχθη κοινότεραι πλείοσιν, αἱ δὲ κατὰ τὰς δυνάμεις τὰς προειρημένας οὐκέτι τόποις ὅλοις [8] ὑπάρχουσιν οὐδὲ συνεχεῖαις λίθων οὐδὲ μεγέθεσιν. ἔνιοι δὲ καὶ σπάνιοι πάνπαν εἰσὶ καὶ σμικροὶ καθάπερ ἢ τε σμάραγδος καὶ τὸ σάρδιον καὶ ὁ ἄνθραξ καὶ ἡ σάμφειρος καὶ σχεδὸν οἱ ἐν λόγῳ τῶν εἰς τὰ σφραγῖδια γλυπτῶν. οἱ δὲ καὶ ἐν ἑτέροις εὐρίσκονται διακοπτομένοις. ὀλίγοι δὲ καὶ οἱ περὶ τὴν πύρωσιν καὶ καῦσιν, ὑπὲρ ὧν δὴ καὶ πρῶτον ἴσως λεκτέον τίνας καὶ πόσας ἔχουσι διαφοράς.

[9] Κατὰ δὲ τὴν πύρωσιν οἱ μὲν τήκονται καὶ ρέουσιν ὥσπερ οἱ μεταλλευτοί. ρεῖ γὰρ ἅμα τῷ ἀργύρῳ καὶ τῷ χαλκῷ καὶ σιδήρῳ καὶ ἡ λίθος ἡ ἐκ τούτων, εἴτ' οὖν διὰ τὴν ὑγρότητα τῶν ἐνυπαρχόντων εἴτε καὶ δι' αὐτούς· ὡσαύτως δὲ καὶ οἱ πυρομάχοι καὶ οἱ μυλῖαι συρρέουσιν οἷς ἐπιτιθέασιν οἱ καίοντες. οἱ δὲ καὶ ὅλως λέγουσι πάντας τήκεσθαι πλὴν τοῦ μαρμάρου, τοῦτον δὲ κατακαίεσθαι καὶ κονίαν ἐξ αὐτοῦ γίνεσθαι. [10] δόξειε δ' ἂν οὕτως ὅλως ἐπὶ πλεῖον εἰρησθαι· πολλοὶ γὰρ οἱ ῥηγνύμενοι καὶ διαπηδῶντες ὡς ἀπομαχόμενοι τὴν πύρωσιν ὥσπερ οὐδ' ὁ κέραμος. ὁ καὶ κατὰ λόγον ἐστίν, οἷτινες ἐξυγρασμένοι τυγχάνουσιν· τὸ γὰρ [11] τηκτὸν ἐνικμον εἶναι δεῖ καὶ ὑγρότητ' ἔχειν πλείω. φασὶ δὲ καὶ τῶν ἡλιουμένων τοὺς μὲν ἀναξηραίνεσθαι τελείως ὥστ' ἀχρεῖους εἶναι μὴ καταβρεχθέντας πάλιν καὶ συνικμασθέντας τοὺς δὲ καὶ μαλακωτέρους καὶ διαθραύστους μᾶλλον. φανερόν δὲ ὡς ἀμφοτέρων μὲν ἐξαιρεῖται τὴν ὑγρότητα, συμβαίνει δὲ τοὺς μὲν πυκνοὺς ἀποξηρανομένους σκληρύνεσθαι, τοὺς δὲ μαλ' ἢ οὐκ ἢ σύμφυσις τοιαύτη θραυστοὺς [12] εἶναι καὶ κατακτοῦς. ἔνιοι δὲ τῶν θραυστῶν ἀνθρακοῦνται τῇ καύσει καὶ διαμένουσι πλείω χρόνον ὥσπερ οἱ περὶ Βίνας ἐν τῷ μετάλλῳ οὗς ὁ ποταμὸς καταφέρει· καίονται γὰρ ὅταν ἀνθρακες ἐπιτεθῶσι καὶ μέχρι τούτου ἄχρις ἂν φυσᾷ τις, εἴτ' ἀπομαραίνονται καὶ πάλιν καίονται, διὸ καὶ πολὺν χρόνον ἢ χρῆσις· ἢ δ' ὁσμή βαρεῖα σφόδρα καὶ δυσχερής. [13] ὃν δὲ καλοῦσι σπῖνον, ὃς ἦν ἐν τοῖς μέταλλοις τούτοις, οὗτος διακοπεῖς καὶ συντεθεὶς πρὸς ἑαυτὸν ἐν τῷ ἡλίῳ τιθέμενος καίεται, καὶ μᾶλλον [14] ἐὰν ἐπιψεκασθῇ καὶ περιρράνῃ τις. ὁ δὲ Λιπαραῖος ἐκποροῦται τε τῇ καύσει καὶ

γίνεται κισσηροειδής ὥσθ' ἅμα τήν τε χροάν μεταβάλλειν καὶ τὴν πυκνότητα· μέλας τε γὰρ καὶ λεῖός ἐστι καὶ πυκνὸς ἄκαυστος ὢν. γίνεται δ' οὗτος ἐν τῇ κισσῇ διειλημμένος ἄλλοθι καὶ ἄλλοθι καθάπερ ἐν χυτριδίῳ καὶ οὐ συνεχής, ὥσπερ καὶ ἐν Μήλῳ φασὶ τὴν κίσσηριν ἐν ἄλλῳ τινὶ λίθῳ γίνεσθαι. καὶ εἴη ἂν τοῦτ' ὥσπερ [15] ἀντιπεπονθός· πλὴν ὁ λίθος οὗτος οὐχ ὁμοίος τῷ Λιπαράῳ. ἐκποροῦται δὲ καὶ ὁ ἐν Τετράδι τῆς Σικελίας γινόμενος· τοῦτο δὲ τὸ χωρίον ἐστὶ κατὰ Λιπάραν. ὁ δὲ λίθος <ὁ> ἐν τῇ ἄκρᾳ τῇ Ἐρινεάδι καλουμένη πολὺς ὁμοίως τοῖς ἐν Βίναις καιόμενος ὁσμὴν ἀφίησιν ἀσφάλτου, τὸ δ' [16] ἐκ τῆς κατακαύσεως ὁμοιον γίνεται γῇ κεκαυμένη. οὗς δὲ καλοῦσιν εὐθύς ἄνθρακας τῶν ὀρυττομένων διὰ τὴν χρεῖαν εἰςὶ γεώδεις, ἐκκαίονται δὲ καὶ πυροῦνται καθάπερ οἱ ἄνθρακες. εἰςὶ δὲ περὶ τὴν Λιγυστικὴν ὅπου καὶ τὸ ἤλεκτρον, καὶ ἐν τῇ Ἠλείᾳ βαδίζόντων [17] Ὀλυμπιάζε τὴν δι' ὄρους, οἷς καὶ οἱ χαλκεῖς χρῶνται. εὐρέθῃ δὲ ποτε ἐν τοῖς ἐν Σκαπτῇ Ὑλῇ μετάλλοις λίθος ὃς τῇ μὲν ὄψει παρόμοιος ἦν ξύλῳ σαπρῷ, ὅτε δ' ἐπιχέοι τις τὸ ἔλαιον ἐκαίετο, καὶ ὅτ' ἐκκαυθεῖν τότ' ἐπαύετο καὶ αὐτὸς ὥσπερ ἀπαθὴς ὢν. τῶν μὲν οὖν καιομένων σχεδὸν αὐταὶ διαφοραί.

[18] Ἄλλο δέ τι γένος ἐστὶ λίθων ὥσπερ ἐξ ἐναντίων πεφυκός, ἄκαυστον ὅλως, ἄνθραξ καλούμενος, ἐξ οὗ καὶ τὰ σφραγίδια γλύφουσιν, ἐρυθρὸν μὲν τῷ χρώματι, πρὸς δὲ τὸν ἥλιον τιθέμενον ἄνθρακος καιομένου ποιεῖ χροάν. τιμώτατον δ' ὥς εἰπεῖν· μικρὸν γὰρ σφόδρα τετταράκοντα χρυσῶν. [19] ἄγεται δὲ οὗτος ἐκ Καρχηδόνης καὶ Μασσαλίας. οὐ καίεται δὲ ὁ περὶ Μίλητον γωνιοειδής ὢν ἐν ᾧ περ καὶ τὰ ἐξάγωνα. καλοῦσι δ' ἄνθρακα καὶ τοῦτον. ὁ καὶ θαυμαστόν ἐστιν, — ὅμοιον γὰρ τρόπον τινὰ καὶ τὸ τοῦ ἀδάμαντος, — οὐ γὰρ οὐδ' ὥσπερ ἡ κίσσηρις καὶ τέφρα δόξειεν ἂν διὰ τὸ μηδὲν ἔχειν ὑγρόν· ταῦτα γὰρ ἄκαυστα καὶ ἀπύρωτα διὰ τὸ ἐξηρῆσθαι τὸ ὑγρόν· ἐπεὶ καὶ τὸ ὅλον ἡ κίσσηρις ἐκ κατακαύσεως δοκεῖ τισὶ γίνεσθαι, πλὴν τῆς ἐκ τοῦ ἀφροῦ τῆς θαλάσσης συνισταμένης. [20] λαμβάνουσι δὲ τὴν πίστιν διὰ τῆς αἰσθήσεως ἐκ τε τῶν περὶ τοὺς κρατῆρας γενομένων καὶ ἐκ τῆς διαβόρου λίθου τῆς φλογουμένης, ἣ κισσηροῦται. μαρτυρεῖν δὲ καὶ οἱ τόποι δοκοῦσιν ἐν οἷς ἡ γένεσις· καὶ γὰρ ἐν τοῖς <καιομένοις> μάλιστα καὶ ἡ κίσσηρις. [21] τάχα δὲ ἡ μὲν οὕτως αἰ δ' ἄλλως καὶ πλείους τρόποι τῆς γενέσεως. ἡ γὰρ ἐν Νισύρῳ καθάπερ ἐξ ἄμμου τινὸς ἔοικε συγκεῖσθαι. σημεῖον δὲ λαμβάνουσιν ὅτι τῶν εὐρισκομένων ἔναι διαθρύπτονται ἐν ταῖς χερσὶν ὥσπερ εἰς ἄμμον διὰ τὸ μῆπω συνεστάναι μηδὲ συμπεπηγῆναι. εὐρίσκουσι δ' ἀθρόας κατὰ μικρὰ πολλὰς ὅσον χειροπληθεῖς ἢ μικρῷ μείζους ὅταν ἀπαμήσωνται τᾶν· ἐλαφρὰ

δὲ σφόδρα καὶ ἡ ἄμμος· ἡ δ' αὖ ἐν Μήλῳ πᾶσα μὲν βραεῖα ἔνια δ' αὖ ἐν λίθῳ τινὶ ἐτέρῳ [22] γίνεται καθάπερ ἐλέχθη πρότερον· διαφορὰς δ' ἔχουσι πρὸς ἀλλήλας καὶ χρώματι καὶ πυκνότητι καὶ βάρει· χρώματι μὲν ὅτι μέλαινα ἡ ἐκ τοῦ ῥύακος τοῦ ἐν Σικελίᾳ· πυκνότητι δὲ καὶ βάρει αὕτη γε καὶ μυλώδης· γίνεται γάρ τις καὶ τοιαύτη κίσσηρις καὶ βάρος ἔχει καὶ πυκνότητα καὶ ἐν τῇ χρήσει πολυτιμότερα τῆς ἐτέρας· σημηκτικὴ δὲ καὶ ἡ ἐκ τοῦ ῥύακος μᾶλλον τῆς κούφης καὶ λευκῆς, σημηκτικωτάτη δ' ἡ ἐκ τῆς θαλάσσης αὐτῆς· καὶ περὶ μὲν τῆς κισσήριδος ἐπὶ τοσοῦτον εἰρήσθω· περὶ δὲ τῶν πυρουμένων καὶ τῶν ἀπυρώτων λίθων ἀφ' ὧν καὶ εἰς τοῦτο ἐξέβημεν ἐν ἄλλοις θεωρητέον τὰς αἰτίας· [23] Τῶν δὲ λίθων καὶ ἄλλαι <περιτταῖ> τυγχάνουσιν ἐξ ὧν καὶ τὰ σφραγίδια γλύφουσιν, αἱ μὲν τῇ ὄψει μόνον οἷον τὸ σάρδιον καὶ ἡ ἱάσπις καὶ ἡ σάπφειρος· αὕτη δ' ἐστὶν ὥσπερ χρυσόπαστος· ἡ δὲ σμάραγδος καὶ δυνάμεις τινὰς ἔχει· τοῦ τε γὰρ ὕδατος ὥσπερ εἵπομεν ἐξομοιοῦται τὴν χροάν ἐαυτῇ, μετρία μὲν οὔσα ἐλάττωνος, ἡ δὲ μεγίστη [24] παντός, ἡ δὲ χειρίστη τοῦ καθ' αὐτὴν μόνον· καὶ πρὸς τὰ ὄμματα ἀγαθὴ, διὸ καὶ τὰ σφραγίδια φοροῦσιν ἐξ αὐτῆς ὥστε βλέπειν· ἔστι δὲ σπανία καὶ τὸ μέγεθος οὐ μεγάλη, πλὴν εἰ πιστεύειν ταῖς ἀναγραφαῖς δεῖ ὑπὲρ τῶν βασιλέων τῶν Αἰγυπτίων· ἐκεῖνοις γὰρ φασι κομισθῆναί ποτ' ἐν δώροις παρὰ τοῦ Βαβυλωνίων βασιλέως μῆκος μὲν τετράπηχυν πλάτος δὲ τρίπηχυν· ἀνακεῖσθαι δὲ καὶ ἐν τῷ τοῦ Διὸς ὀβελίσκους σμαράγδου τέτταρας, μῆκος μὲν τετταράκοντα πηχῶν, εὖρος δὲ τῇ μὲν τέτταρας τῇ δὲ δύο· ταῦτα μὲν οὖν τὰ κατὰ τὴν [25] ἐκείνων γραφήν· τῶν δὲ Λακαίνων καλουμένων ὑπὸ πολλῶν ἢ ἐν Τύρῳ μεγίστη· στήλη γὰρ ἐστὶν εὐμεγέθης ἐν τῷ τοῦ Ἡρακλέους ἱερῷ· εἰ μὴ ἄρα ψευδὴς σμάραγδος, καὶ γὰρ τοιαύτη γίνεται τις φύσις· γίνεται δὲ ἐν τοῖς ἐν ἐφικτῷ καὶ γνωρίμοις τόποις διτταχοῦ μάλιστα περὶ τε Κύπρον ἐν τοῖς χαλκωρυχείοις καὶ ἐν τῇ νήσῳ τῇ ἐπικειμένῃ Χαλκηδόνι· καὶ ιδιωτέρως εὐρίσκουσιν ἐν ταύτῃ· μεταλλεῦεται γὰρ ὥσπερ τᾶλλα καὶ ἡ φύσις, κατὰ ῥάβδους τείνουσα ἐν Κύπρῳ αὕτη καθ' [26] αὐτὴν πολλὰς· εὐρίσκονται δὲ σπάνια μέγεθος ἔχουσαι σφραγίδος ἄλλ' ἐλάττους αἱ πολλαί, διὸ καὶ πρὸς τὴν κόλλησιν αὐτῇ χρῶνται τοῦ χρυσοῦ· κολλᾷ γὰρ ὥσπερ ἡ χρυσοκόλλα· καὶ ἐνιοί γε δὴ καὶ ὑπολαμβάνουσι τὴν αὐτὴν φύσιν εἶναι· καὶ γὰρ τὴν χροάν παρόμοιαι τυγχάνουσιν· ἄλλ' ἡ μὲν χρυσοκόλλα δαψιλῆς καὶ ἐν τοῖς χρυσείοις καὶ ἔτι μᾶλλον ἐν τοῖς χαλκωρυχείοις ὥσπερ ἐν τοῖς περὶ <τούτους> τοὺς [27] τόπους· ἡ δὲ σμάραγδος σπανία καθάπερ εἴρηται· δοκεῖ γὰρ ἐκ τῆς ἰάσπιδος γίνεσθαι· φασι γὰρ εὐρεθῆναί ποτε ἐν Κύπρῳ λίθον ἧς τὸ μὲν ἥμισυ σμάραγδος ἦν τὸ

ἥμισυ δὲ ἱάσπισ ὡς οὐπω μεταβεβληκυίας ἀπὸ τοῦ ὕδατος. ἔστι δέ τις αὐτῆς ἐργασία πρὸς τὸ λαμπρόν· ἀργή γὰρ οὕσα οὐ λαμπρά.

[28] Αὕτη τε δὴ περιττὴ τῇ δυνάμει καὶ τὸ λυγγούριον· καὶ γὰρ ἐκ τούτου γλύφεται τὰ σφραγίδια καὶ ἔστι στερεωτάτη καθάπερ λίθος· ἔλκει γὰρ ὥσπερ τὸ ἤλεκτρον, οἱ δὲ φασιν οὐ μόνον κάρφη καὶ φύλλα ἀλλὰ καὶ χαλκὸν καὶ σίδηρον ἐὰν ᾗ λεπτός, ὥσπερ καὶ Διοκλῆς ἔλεγεν. ἔστι δὲ διαφανὴ τε σφόδρα καὶ ψυχρά. βελτίω δὲ τὰ τῶν ἀγρίων ἢ τὰ τῶν ἡμέρων καὶ τὰ τῶν ἀρρένων ἢ τὰ τῶν θηλειῶν ὡς καὶ τῆς τροφῆς διαφοροῦσης, καὶ τοῦ πονεῖν ἢ μὴ πονεῖν, καὶ τῆς τοῦ σώματος ὅλως φύσεως, ἢ ξηρότερον τὸ δ' ὑγρότερον. εὐρίσκουσι δ' ἀνορύττοντες οἱ ἔμπειροι· κατακρύπτεται γὰρ καὶ ἐπαμᾶται γῆν ὅταν οὐρήσῃ. γίνεται [29] δὲ καὶ κατεργασία τις αὐτοῦ πλείων. ἐπεὶ δὲ καὶ τὸ ἤλεκτρον λίθος, καὶ γὰρ ὀρυκτὸν τὸ περὶ <τῆν> Λιγυστικήν, καὶ τούτῳ ἂν ἢ τοῦ ἔλκειν δύναμις ἀκολουθοίη. μάλιστα δὲ δηλονότι <ἔλκει> καὶ φανερώταθ' ἢ τὸν σίδηρον ἄγουσα. γίνεται δὲ καὶ αὕτη σπανία καὶ ὀλιγαχοῦ. καὶ [30] αὕτη μὲν δὴ συναριθμείσθω τὴν δύναμιν ὁμοίαν ἔχειν. ἐξ ὧν δὲ τὰ σφραγίδια ποιεῖται καὶ ἄλλαι πλείους εἰσίν, οἷον ἢ θ' ὑαλοειδῆς, ἢ καὶ ἔμφασιν ποιεῖ καὶ διάφασιν, καὶ τὸ ἀνθράκιον, καὶ ἡ ὄμφαξ· ἔτι δὲ καὶ ἡ κρύσταλλος καὶ τὸ ἀμέθυσον, ἅμφω δὲ διαφανῇ, εὐρίσκονται δὲ καὶ αὗται καὶ τὸ σάρδιον διακοπτομένων τινῶν πετρῶν. καὶ ἄλλαι δὲ ὡς προεῖρηται πρότερον διαφορὰς ἔχουσαι καὶ συνώνυμοι πρὸς ἀλλήλας. τοῦ γὰρ σαρδίου τὸ μὲν διαφανὲς ἐρυθρότερον δὲ καλεῖται θῆλυ, τὸ δὲ [31] διαφανὲς μὲν μελάντερον δὲ ἄρρην. καὶ τὰ λυγγούρια δὲ ὡσαύτως, ὧν τὸ θῆλυ διαφανέστερον καὶ ξανθότερον. καλεῖται δὲ καὶ κύανος ὁ μὲν ἄρρην ὁ δὲ θῆλυς· μελάντερος δὲ ὁ ἄρρην. τὸ δ' ὀνύχιον μικτὸν λευκῷ καὶ φαιῷ παρ' ἀλληλα. τὸ δ' ἀμέθυσον οἰνωπὸν τῇ χρώα. καλὸς δὲ λίθος καὶ ὁ ἀχάτης ὁ ἀπὸ τοῦ Ἀχάτου ποταμοῦ τοῦ ἐν Σικελίᾳ καὶ [32] πωλεῖται τίμιος. ἐν Λαμψάκῳ δὲ ποτ' ἐν τοῖς χρυσείοις εὐρέθη θαυμαστὴ λίθος ἐξ ἧς ἀνενεχθείσης πρὸς Ἀστυρα (?) σφραγίδιον γλυφθὲν ἀνεπέμφθη βασιλεῖ διὰ τὸ περιττόν.

[33] Καὶ αὗται μὲν ἅμα τῷ καλῷ καὶ τὸ σπάνιον ἔχουσιν. αἱ δὲ δὴ ἐκ τῆς Ἑλλάδος εὐτελέστεραι, οἷον τὸ ἀνθράκιον τὸ ἐξ Ὀρχομενοῦ τῆς Ἀρκαδίας. ἔστι δὲ οὗτος μελάντερος τοῦ Χίου· κάτοπτρα δὲ ἐξ αὐτοῦ ποιοῦσι· καὶ ὁ Τροιζήνιος· οὗτος δὲ ποικίλος τὰ μὲν φοινικοῖς τὰ δὲ λευκοῖς χρώμασι. ποικίλος δὲ καὶ ὁ Κορίνθιος τοῖς αὐτοῖς χρώμασι [34] πλὴν τὸ λευκὸν χλωροειδέστερον. τὸ δ' ὅλον πολλοὶ τυγχάνουσιν οἱ τοιοῦτοι ἀλλ' οἱ περιττοὶ σπάνιοι καὶ ἐξ ὀλίγων τόπων, οἷον ἐκ τε Καρχηδόνης καὶ ἐκ τῶν περὶ

Μασσαλίαν καὶ ἐξ Αἰγύπτου κατὰ τοὺς Καταδούπους καὶ Σύνηνην πρὸς Ἐλεφαντίνῃ πόλει καὶ ἐκ τῆς Ψεφῶ [35] καλουμένης χώρας. καὶ ἐν Κύπρῳ ἦ τε σμάραγδος καὶ ἡ ἴασπις. οἷς δὲ εἰς τὰ λιθοκόλλητα χρῶνται ἐκ τῆς Βακτριανῆς εἰσι πρὸς τῇ ἐρήμῳ. συλλέγουσι δὲ αὐτοὺς ὑπὸ τοὺς ἐτησίαις ἰππεῖς ἐξιόντες· τότε γὰρ ἐμφανεῖς γίνονται κινουμένης τῆς ἄμμου διὰ τὸ μέγεθος τῶν πνευμάτων. [36] εἰσὶ δὲ μικροὶ καὶ οὐ μεγάλοι. τῶν σπουδαζομένων δὲ λίθων ἐστὶ καὶ ὁ μαργαρίτης καλούμενος, διαφανῆς μὲν τῇ φύσει, ποιοῦσι δ' ἐξ αὐτοῦ τοὺς πολυτελεῖς ὄρμους. γίνεται δὲ ἐν ὀστρείῳ τινὶ παραπλησίῳ ταῖς πίνναις <πλὴν ἐλάττονι· μέγεθος δὲ ἡλικὸν ἰχθύος ὀφθαλμὸς εὐμεγέθης>, φέρει δ' ἦ τε Ἰνδικὴ χώρα καὶ νῆσοί τινες τῶν [37] ἐν τῇ Ἐρυθρᾷ. τὸ μὲν οὖν περιττὸν σχεδὸν ἐν ταύταις. εἰσὶ δὲ καὶ ἄλλαι τινές, οἷον ὁ τε ἐλέφας ὁ ὀρυκτὸς ποικίλος μέλανι καὶ λευκῷ καὶ ἦν καλοῦσι σάπφειρον· αὕτη γὰρ μέλαινα οὐκ ἄγαν πόρρω τοῦ κυάνου τοῦ ἄρρενος. καὶ <ἡ> πρασίτις· αὕτη δὲ ἰώδης τῇ χροᾷ. πυκνὴ δὲ καὶ <ἡ> αἱματῖτις· αὕτη δ' αὐχμώδης καὶ κατὰ τοῦνομα ὡς αἵματος ξηροῦ πεπηγότος. ἄλλη δ' ἡ καλουμένη ξανθή, οὐ ξανθὴ μὲν τὴν χροάν, ἔκλευκος δὲ μάλλον, ὃ καλοῦσι χρῶμα οἱ Δωριεῖς ξανθόν. [38] τὸ γὰρ κουράλιον, καὶ γὰρ τοῦθ' ὥσπερ λίθος, τῇ χροᾷ μὲν ἐρυθρόν, περιφερὲς δ' ὡς ἂν ῥίζα· φύεται δ' ἐν τῇ θαλάττῃ. τρόπον δέ τιν' οὐ πόρρω τούτου τῇ φύσει καὶ ὁ Ἰνδικὸς κάλαμος ἀπολελιθωμένος. ταῦτα μὲν οὖν ἄλλης σκέψεως.

[39] Τῶν δὲ λίθων πολλαὶ τινες αἱ φύσεις καὶ τῶν μεταλλευομένων. ἔναι γὰρ ἅμα χρυσὸν ἔχουσι καὶ ἄργυρον, προφανῆ δὲ μόνον ἄργυρον· βαρύτεραι δὲ αὗται πολὺ καὶ τῇ ῥοπῇ καὶ τῇ ὀσμῇ· καὶ κύανος αὐτοφυῆς ἔχων ἐν ἑαυτῷ χρυσοκόλλαν. ἄλλη δὲ λίθος ὁμοία τὴν χροάν τοῖς [40] ἄνθραξι, βάρος δ' ἔχουσα. καὶ τῶν μὲν τοιούτων πλείους ἂν τις λάβοι [41] τὰς ιδιότητας. ἔναι δὲ λίθοι καὶ τὰς τοιαύτας ἔχουσι δυνάμεις εἰς τὸ μὴ πάσχειν, ὥσπερ εἵπομεν, οἷον τὸ μὴ γλύφεσθαι σιδηρίοις ἀλλὰ λίθοις ἐτέροις. ὅλως μὲν ἡ κατὰ τὰς ἐργασίας καὶ τῶν μειζόνων λίθων πολλὴ διαφορὰ. πριστοὶ γάρ, οἱ δὲ γλυπτοί, καθάπερ ἐλέχθη, καὶ τορνευτοὶ τυγχάνουσι, καθάπερ καὶ ἡ μαγνήτις αὕτη λίθος ἡ καὶ <τῇ> ὄψει <τὸ> περιττὸν ἔχουσα, καὶ ἥ γε δὴ τινες θαυμάζουσι τὴν [42] ὁμοίωσιν τῷ ἀργύρῳ μηδαμῶς οὔσης συγγενοῦς. πλείους δ' εἰσὶν οἱ δεχόμενοι πάσας τὰς ἐργασίας. ἐπεὶ καὶ ἐν Σίφνῳ τοιοῦτός τις ἐστὶν ὀρυκτὸς ὡς τρία στάδια ἀπὸ θαλάττης, στρογγύλος καὶ βωλώδης, καὶ τορνεύεται καὶ γλύφεται διὰ τὸ μαλακόν· ὅταν δὲ πυρωθῇ καὶ ἀποβαφῇ τῷ ἐλαίῳ, μέλας τε σφόδρα γίνεται καὶ σκληρὸς. ποιοῦσι δ' ἐξ [43] αὐτοῦ σκευὴ τὰ ἐπιτράπεζα. οἱ

μὲν τοιοῦτοι πάντες προσδέχονται τὴν τοῦ σιδήρου δύναμιν· ἔνιοι δὲ λίθοις ἄλλοις γλύφονται, σιδηρίοις δ' οὐ δύναται καθάπερ εἵπομεν. οἱ δὲ σιδηρίοις μὲν ἀμβλυτέροις δέ· καὶ εἰσὶν ἄλλαι διαφοραὶ (?). παραπλησίως δὲ καὶ ἄτοπον τὸ ἐνίους μὴ τέμνεσθαι <τῷ> σιδήρῳ· καίτοι τὰ στερεώτερα <ὄλως> ἰσχυρότερον [44] τέμνει καὶ <ὁ> σίδηρος λίθου σκληρότερος ὢν. ἄτοπον δὲ κάκεῖνο φαίνεται διότι ἢ μὲν ἀκόνῃ κατεσθίει τὸν σίδηρον, ὁ δὲ σίδηρος ταύτην μὲν δύναται διαιρεῖν καὶ ῥυθμίζειν, ἐξ ἧς δ' αἱ σφραγίδες οὐ. καὶ πάλιν ὁ λίθος ὃ γλύφουσι τὰς σφραγίδας ἐκ τούτου ἐστὶν ἐξ οὐπὲρ αἱ ἀκόνας, [45] ἢ ἐξ ὁμοίου τούτῳ· ἄγεται δὲ ἡ <βελτίστη> ἐξ Ἀρμενίας. θαυμαστὴ δὲ φύσις καὶ τῆς βασανίζουσας τὸν χρυσόν· δοκεῖ γὰρ διὰ τὴν αὐτὴν ἔχειν τῷ πυρὶ δύναμιν· καὶ γὰρ ἐκεῖνο δοκιμάζει. διὸ καὶ ἀποροῦσί τινες οὐκ ἄγαν οἰκείως ἀποροῦντες. οὐ γὰρ τὸν αὐτὸν τρόπον δοκιμάζει, ἀλλὰ τὸ μὲν πῦρ τῷ τὰ χρώματα μεταβάλλειν καὶ ἀλλοιοῦν, ὁ δὲ λίθος τῇ παρατρίψει· δύναται γὰρ ὡς ἔοικεν ἐκλαμβάνειν τὴν ἐκάστου φύσιν. [46] εὐρήσθαι δὲ φασὶ νῦν ἀμείνω πολὺ τῆς πρότερον ὥστε μὴ μόνον τὸν ἐκ τῆς καθάρσεως ἀλλὰ καὶ τὸν κατάχαλκον χρυσὸν καὶ ἄργυρον γνωρίζειν καὶ πόσον εἰς τὸν στατήρα μέμικται. σημεῖα δ' ἐστὶν αὐτοῖς ἀπὸ τοῦ ἐλαχίστου· ἐλάχιστον δὲ γίνεται [κριθῇ, εἴτα κόλλυβος, εἴτα] τεταρτημόριον ἢ ἡμιωβόλιον, [47] ἐξ ὧν γνωρίζουσι τὸ καθῆκον. εὐρίσκονται δὲ τοιαῦτα πᾶσαι ἐν τῷ ποταμῷ Τμώλῳ. λεία δ' ἡ φύσις αὐτῶν καὶ ψηφοειδῆς, πλατεῖα, οὐ στρογγύλη. μέγεθος δὲ ὅσον διπλασία τῆς μεγίστης ψήφου. διαφέρει δ' αὐτῆς πρὸς τὴν δοκιμασίαν τὰ ἄνω <τὰ> πρὸς τὸν ἥλιον ἢ τὰ κάτω καὶ βέλτιον δοκιμάζει τὰ ἄνω· τοῦτο δὲ ὅτι ξηρότερα τὰ ἄνω· κωλύει γὰρ ἡ ὑγρότης εἰς τὸ ἐκλαμβάνειν· ἐπεὶ καὶ ἐν τοῖς καύμασι τὸ δοκιμάζειν χεῖρον· ἀνίησι γὰρ τινα νοτίδα ἐξ αὐτῆς δι' ἣν ἀπολισθαίνει. συμβαίνει δὲ τοῦτο καὶ ἄλλοις τῶν λίθων, καὶ ἐξ ὧν τὰ ἀγάλματα ποιοῦσιν, ὃ καὶ σημεῖον ὑπολαμβάνεται ὡς ἰδίοντος τοῦ ἔδους.

[48] Αἱ μὲν οὖν τῶν λίθων διαφοραὶ καὶ δυνάμεις σχεδὸν εἰσὶν ἐν τούτοις. αἱ δὲ τῆς γῆς ἐλάττονες μὲν ἰδιώτεροι δέ. τὸ μὲν γὰρ τήκεσθαι καὶ μαλάττεσθαι καὶ πάλιν ἀποσκληρύνεσθαι καὶ ταύτη συμβαίνει. τήκεται μὲν γὰρ ἄμα τοῖς χυτοῖς καὶ ὀρυκτοῖς ὥσπερ καὶ ὁ λίθος· μαλάττεται δέ, λίθους τε ποιοῦσιν, οἷον τὰς τε ποικίλας καὶ τὰς ἄλλας [49] συντιθεμένας. ἀπάσας γὰρ πυροῦντες καὶ μαλάττοντες ποιοῦσιν. εἰ δὲ καὶ ὁ ὕελος ἐκ τῆς ὑελίτιδος ὥς τινὲς φασὶ, καὶ αὕτη πυρώσει γίνεται. ἰδιωτάτη δ' ἡ τῷ χαλκῷ μιγνυμένη· πρὸς γὰρ τῷ τήκεσθαι καὶ μίγνυσθαι καὶ δύναμιν ἔχει περιττὴν ὥστε τῷ κάλλει τῆς χροᾶς ποιεῖν διαφοράν. περὶ δὲ Κιλικίαν ἐστὶ τις ἡ ἔψεται γῆ καὶ γίνεται γλισχρά·

ταύτη δ' ἀλείφουσι τὰς ἀμπέλους ἀντὶ ἰξοῦ πρὸς τοὺς ἵπας. [50] εἷη δ' ἂν λαμβάνειν καὶ ταύτας τὰς διαφορὰς ὅσαι πρὸς τὴν ἀπολίθωσιν εὐφυνεῖς· ἐπεὶ αἶ γε τοὺς τούτων ποιοῦσαι χυμοὺς διαφόρους ἀλλήλων <ιδίαν> τιν' ἔχουσι φύσιν, ὥσπερ καὶ αἱ τοὺς τῶν φυτῶν. ἀλλὰ μᾶλλον ἂν τις αὐτὰς τοῖς χρώμασι διαριθμήσειεν οἷσπερ καὶ οἱ γραφεῖς [40*] χρῶνται. τὸ ὅλον ἐν τοῖς μετάλλοις πλεῖσται καὶ ιδιώταται φύσεις εὐρίσκονται τῶν τοιούτων, ὧν τὰ μὲν ἐστὶ γῆς καθάπερ ὄχρα καὶ μίλτος, τὰ δ' οἷον ἄμμου καθάπερ χρυσοκόλλα καὶ κύανος, τὰ δὲ [50] κονίας οἷον σανδαράκη καὶ ἄρρενικὸν καὶ ὅσα ὅμοια τούτοις. καὶ γὰρ ἡ γένεσις τούτων, ὥσπερ ἐξ ἀρχῆς εἶπομεν, ἥτοι συρροῆς τινος ἢ διηθήσεως γινομένης. καὶ ἑνία γε δὴ φαίνεται πεπυρωμένα καὶ οἷον κατακεκαυμένα, οἷον καὶ ἡ σανδαράκη καὶ τὸ ἄρρενικὸν καὶ τὰ ἄλλα τὰ τοιαῦτα. πάντα δ' ὡς ἀπλῶς εἰπεῖν ἀπὸ τῆς ἀναθυμιάσεως ταῦτα τῆς [51] ξηρᾶς καὶ καπνώδους. εὐρίσκεται δὴ πάντ' ἐν τοῖς μετάλλοις τοῖς ἀργυρεῖσι τε καὶ χρυσεῖσι, ἑνία δὲ καὶ ἐν τοῖς χαλκωρυχεῖσι, οἷον ἄρρενικόν, σανδαράκη, χρυσοκόλλα, μίλτος, ὄχρα, κύανος· ἐλάχιστος δὲ οὗτος καὶ κατ' ἐλάχιστα. τῶν δ' ἄλλων τῶν μὲν εἰσι ῥάβδοι, τὴν δ' ὄχραν ἀθρόαν πῶς φασιν εἶναι· μίλτον δὲ παντοδαπὴν ὥστε εἰς τὰ ἀνδρείκελα χρῆσθαι τοὺς γραφεῖς· καὶ ὄχραν ἀντ' ἄρρενικοῦ διὰ τὸ [52] μῆδὲν τῇ χροᾷ διαφέρειν, δοκεῖν δέ. ἀλλὰ μίλτου τε καὶ ὄχρας ἐστὶν ἑνιαχοῦ μέταλλα καὶ κατὰ ταῦτα καθάπερ ἐν Καππαδοκίᾳ, καὶ ὀρύττεται πολλή. χαλεπὸν δὲ τοῖς μεταλλευταῖς φασιν εἶναι τὸ πνίγεσθαι· ταχὺ γὰρ καὶ ἐν ὀλίγῳ τοῦτο ποιεῖν. βελτίστη δὲ δοκεῖ μίλτος ἢ Κεῖα εἶναι· γίνονται γὰρ πλείους. ἡ μὲν οὖν ἐκ τῶν μετάλλων, ἐπειδὴ καὶ τὰ σιδηρεῖα ἔχει μίλτον. [53*] ἐν δὲ τῷ μικρῷ <μετάλλῳ> μεταλλεύεται καθ' αὐτήν. [52*] ἀλλὰ καὶ ἡ Λημνία καὶ ἡν καλοῦσι Σινωπικὴν. αὕτη [53] δ' ἐστὶν ἡ Καππαδοκική, κατὰγεται δ' εἰς Σινώπην. ἔστι δὲ αὐτῆς γένη τρία, ἡ μὲν ἐρυθρὰ σφόδρα, ἡ δὲ ἔκλευκος, ἡ δὲ μέση. ταύτην αὐτάρκη καλοῦμεν διὰ τὸ μὴ μίγνυσθαι, τὰς δ' ἑτέρας μίγνυουσι. γίνεται δὲ καὶ ἐκ τῆς ὄχρας κατακαιομένης ἀλλὰ χεῖρων, τὸ δ' εὖρημα Κυδίου. συνεῖδε γὰρ ἐκεῖνος, ὥς φασι, κατακαυθέντος τινὸς παντοπωλίου τὴν [54] ὄχραν ἰδὼν ἡμίκαυστον καὶ πεφοινιγμένην. τιθέασι δ' εἰς τὰς καμίνους χύτρας καινὰς περιπλάσαντες πηλῷ· ὅπῃσι γὰρ διάπυροι γινόμεναι· ὅσῳ δ' ἂν μᾶλλον πυρωθῶσι, τοσούτῳ μᾶλλον μελαντέραν καὶ ἀνθρακωδεστέραν ποιοῦσι. μαρτυρεῖ δ' ἡ γένεσις αὐτή· δόξειε γὰρ ἂν ὑπὸ πυρὸς ἅπαντα ταῦτα μεταβάλλειν, εἴπερ ὁμοίαν ἢ παραπλησίαν δεῖ τὴν [55] ἐνταῦθα τῇ φυσικῇ νομίζειν. ἔστι δέ, ὥσπερ καὶ μίλτος ἢ μὲν αὐτόματος ἢ δὲ τεχνική, καὶ κύανος ὁ μὲν αὐτοφυῆς ὁ δὲ

σκευαστὸς ὥσπερ ἐν Αἰγύπτῳ. γένη δὲ κυάνου τρία, ὁ Αἰγύπτιος, καὶ <ὁ> Σκύθης, καὶ τρίτος ὁ Κύπριος. βέλτιστος δ' ὁ Αἰγύπτιος εἰς τὰ ἄκρατα λειώματα, ὁ δὲ Σκύθης εἰς τὰ ὑδαρέστερα. σκευαστὸς δ' ὁ Αἰγύπτιος. καὶ οἱ γράφοντες τὰ περὶ τοὺς βασιλεῖς καὶ τοῦτο γράφουσι, τίς πρῶτος βασιλεὺς ἐποίησε χυτὸν κύανον μιμησάμενος τὸν αὐτοφυῆ, δῶρά τε πέμπεσθαι παρ' ἄλλων τε καὶ ἐκ Φοινίκης φόρον κυάνου, τοῦ μὲν ἀπύρου τοῦ δὲ πεπυρωμένου. φασὶ δ' οἱ τὰ φάρμακα τρίβοντες τὸν Σκύθην κύανον ἐξ ἑαυτοῦ ποιεῖν χρώματα τέτταρα, τὸ μὲν πρῶτον ἐκ τῶν λεπτοτάτων λευκότατον, τὸ δὲ δεύτερον ἐκ τῶν παχυτάτων μελάντατον. [56] ταῦτά τε δὴ τέχνη γίνεται καὶ ἔτι τὸ ψιμύθιον. τίθεται γὰρ μόλυβδος ὑπὲρ ὄξους ἐν πίθοις ἡλίκον πλίνθος. ὅταν δὲ λάβῃ πάχος, λαμβάνει δὲ μάλιστα ἐν ἡμέραις δέκα, τότε' ἀνοίγουσιν, εἴτ' ἀποξύνουσιν ὥσπερ εὐρώτᾳ τινα ἀπ' αὐτοῦ, καὶ πάλιν τιθέασιν καὶ πάλιν, ἕως ἂν καταναλώσωσι. τὸ δ' ἀποξυόμενον ἐν τριπτῇρι τρίβουσι καὶ [57] ἀπηθοῦσιν αἰεί, τὸ δ' ἔσχατον ὑφιστάμενόν ἐστι τὸ ψιμύθιον. παραπλησίως δὲ καὶ ὁ ἰὸς γίνεται· χαλκὸς γὰρ ἐρυθρὸς ὑπὲρ τρυγὸς τίθεται καὶ ἀποξύεται τὸ ἐπιγινόμενον αὐτῷ, <ἐπεὶ> ἐπιφαίνεται γινόμενος <ὁ [58] ἰός>. γίνεται δὲ καὶ κιννάβαρι τὸ μὲν αὐτοφυὲς τὸ δὲ κατ' ἐργασίαν. αὐτοφυὲς μὲν τὸ περὶ Ἰβηρίαν σκληρὸν σφόδρα καὶ λιθῶδες, καὶ τὸ ἐν Κόλχοις. τοῦτο δὲ φασιν εἶναι <ἐπὶ> κρημνῶν, ὃ καταβάλλουσι τοξεύοντες. τὸ δὲ κατ' ἐργασίαν ὑπὲρ Ἐφέσου μικρὸν <ἐν Κιλιβιανοῖς (?)> ἐξ ἑνὸς τόπου μόνον. ἔστι δ' ἄμμος ἣν συλλέγουσι λαμπυρίζουσαν καθάπερ ὁ κόκκος· ταύτην δὲ τρίψαντες ὅλως ἐν ἀγγεῖοις λιθίνοις λειοτάτην πλύνουσιν ἐν χαλκοῖς [μικρὸν ἐν καλοῖς], τὸ δ' ὑφιστάμενον πάλιν λαβόντες πλύνουσιν καὶ τρίβουσιν, ἐν ᾧ ἐστι τὸ τῆς τέχνης· οἱ μὲν γὰρ ἐκ τοῦ ἴσου πολὺ περιποιοῦσιν, οἱ δ' ὀλίγον ἢ οὐθέν· ἀλλὰ πλύσματι <τῷ> ἐπάνω χρῶνται ἐν πρὸς ἐν ἀλείφοντες. γίνεται δὲ τὸ μὲν ὑφιστάμενον κάτω κιννάβαρι, τὸ δ' ἐπάνω καὶ πλεῖον [59] πλύσμα. καταδειξάι δὲ φασὶ καὶ εὐρεῖν τὴν ἐργασίαν Καλλίαν τινὰ Ἀθηναῖον ἐκ τῶν ἀργυρείων, ὃς οἰόμενος ἔχειν τὴν ἄμμον χρυσίον διὰ τὸ λαμπυρίζειν ἐπραγματεύετο καὶ συνέλεγεν. ἐπεὶ δ' ἦσθετο ὅτι οὐκ ἔχοι τὸ δὲ τῆς ἄμμου κάλλος ἐθαύμαζε διὰ τὴν χροάν, οὕτως ἐπὶ τὴν ἐργασίαν ἦλθε ταύτην. οὐ παλαιὸν δ' ἐστὶν ἀλλὰ περὶ ἔτη μάλιστ' [60] ἐνενήκοντα εἰς ἄρχοντα Πραξιβουλὸν Ἀθήνησι. φανερόν δ' ἐκ τούτων ὅτι μιμεῖται τὴν φύσιν ἢ τέχνη, τὰ δ' ἴδια ποιεῖ, καὶ τούτων τὰ μὲν χρήσεως χάριν τὰ δὲ μόνον φαντασίας ὥσπερ τὰς ἀλοιφάς. ἓνια δὲ ἴσως ἀμφοῖν ὥσπερ χυτὸν ἄργυρον. ἔστι γὰρ τις χρεῖα καὶ τούτου. ποιεῖται δὲ ὅταν <κιννάβαρι> τριφθῇ μετ' ὄξους ἐν ἀγγεῖῳ χαλκῷ καὶ δοίδυκι χαλκῷ. τὰ μὲν

οὖν τοιαῦτα τάχ' ἂν τις λάβοι πλείω.

[61] Τῶν δὲ μεταλλευτῶν τὰ ἐν τοῖς γεωφανέσιν ἔτι λοιπά, [περὶ] ὧν ἡ γένεσις ὥσπερ ἐλέχθη κατ' ἀρχὰς ἐκ συρροῆς τινος καὶ ἐκκρίσεως γίνεται καθαρωτέρας καὶ ὁμαλωτέρας τῶν ἄλλων. χρώματα δὲ παντοῖα λαμβάνουσι καὶ διὰ τὴν τῶν ὑποκειμένων «φύσιν καὶ (?)» διὰ τὴν τῶν «ποιούντων» διαφοράν, ἐξ ὧν τὰς μὲν μαλάττοντες, τὰς δὲ τήκοντες καὶ τρίβοντες συντιθέασι τὰς λίθους τὰς ἐκ τῆς Ἀσίας ταύτας ἀγομένας. [62] αἱ δ' αὐτοφυεῖς καὶ ἅμα τῷ περιττῷ τὸ χρήσιμον ἔχουσαι σχεδὸν τρεῖς εἰσιν ἢ τέτταρες, ἢ τε Μηλιάς καὶ ἡ Κιμωλία καὶ ἡ Σαμία καὶ ἡ Τυμφαϊκὴ τετάρτη παρὰ ταύτας ἡ γύψος. χρῶνται δὲ οἱ γραφεῖς τῇ Μηλιάδι μόνον, τῇ Σαμίᾳ δ' οὐ, καίπερ οὔση καλῇ, διὰ τὸ λίπος ἔχειν καὶ πυκνότητα καὶ λειότητα. τὸ γὰρ ἡρέμα τραχῶδες καὶ ἀλιπὲς ἐπὶ τῆς γραφῆς ἀρμόττει μᾶλλον, ὅπερ ἡ Μηλιάς ἔχει «ἅμα» τῷ ψαφαρῷ. [63] εἰσὶ «δὲ» καὶ ἐν τῇ Μήλῳ καὶ ἐν τῇ Σάμῳ διαφοραὶ τῆς γῆς πλείους. ὀρύττοντα μὲν οὖν οὐκ ἔστιν ὀρθὸν στῆναι ἐν τοῖς ἐν Σάμῳ ἀλλ' ἀναγκαῖον ἢ ὕπτιον ἢ πλάγιον. ἡ δὲ φλὲς ἐπὶ πολὺ διατείνει, τὸ μὲν ὕψος ἡλικὸν δίπους, τὸ δὲ βάθος πολλῷ μείζων· ἐφ' ἑκάτερα δ' αὐτὴν λίθοι περιέχουσιν ἐξ ὧν ἐξαίρεται. διαφυὴν ἔχει διὰ μέσου, καὶ ἡ διαφυὴ βελτίων ἐστὶ τῶν ἔξω, καὶ πάλιν ἐτέραν τοιαύτην καὶ ἐτέραν «τρίτην» ἄχρι τεττάρων. βελτίστη δ' ἡ ἐσχάτη, «ἡ» καλεῖται ἀστήρ· [64] χρῶνται δὲ τῇ γῇ πρὸς τὰ ἱμάτια μάλιστα· ἢ μόνον. χρῶνται δὲ τῇ Τυμφαϊκῇ πρὸς τὰ ἱμάτια καὶ καλοῦσι γύψον οἱ περὶ Θετταλίαν τε καὶ τοὺς τόπους ἐκείνους. ἡ δὲ γύψος γίνεται πλείστη μὲν ἐν Κύπρῳ καὶ περιφανεστάτη. μικρὸν γὰρ ἀφαιροῦσι τῆς γῆς ὀρύττοντες. ἐν Φοινίκῃ δὲ καὶ ἐν Συρίᾳ καίοντες τοὺς λίθους ποιοῦσιν. ἔπειτα δ' ἐν Θουρίοις· καὶ γὰρ ἐκεῖ γίνεται πολλή. τρίτη δὲ ἡ περὶ Τυμφαίαν καὶ περὶ [65] Περραιβίαν καὶ κατ' ἄλλους τόπους. ἡ δὲ φύσις αὐτῶν ἰδία· λιθωδεστέρα γὰρ μᾶλλον ἐστὶν ἢ γεώδης· ὁ δὲ λίθος ἐμφερὴς τῷ ἀλαβαστρίτῃ· μέγας δ' οὐ τέμνεται ἀλλὰ χαλικώδης. ἡ δὲ γλισχρότης καὶ θερμότης ὅταν βρεχθῇ θαυμαστή. χρῶνται γὰρ πρὸς τε τὰ οἰκοδομήματα αὐτῷ τῷ λίθῳ περιχέοντες κἂν τι ἄλλο βούλωνται τοιοῦτο κολλῆσαι. [66] κόψαντες δὲ καὶ ὕδωρ ἐπιχέοντες ταράττουσι ξύλοις, τῇ χειρὶ γὰρ οὐ δύνανται διὰ τὴν θερμότητα. βρέχουσι δὲ παραχρῆμα πρὸς τὴν χρεῖαν· ἐὰν γὰρ μικρὸν πρότερον ταχὺ πήγνυται καὶ οὐκ ἔστι διελεῖν. θαυμαστὴ δὲ καὶ ἡ ἰσχὺς· ὅτε γὰρ οἱ λίθοι ῥήγνυνται καὶ διαφέρονται, ἡ δὲ οὐδαμῶς ἀνίησι, πολλάκις δὲ καὶ τὰ μὲν πέπτωκε καὶ ὑφῆρηται, τὰ [67] δ' ἄνω κρεμάμενα μένει συνεχόμενα τῇ κολλήσει. δύναται δὲ καὶ ὑφαιρουμένη πάλιν καὶ πάλιν ὀπτᾶσθαι καὶ γίνεσθαι

χρησίμη. περὶ μὲν οὖν Κύπρον καὶ Φοινίκην εἰς ταῦτα μάλιστα, περὶ δὲ Ἰταλίαν καὶ εἰς τὸν οἶνον· καὶ οἱ γραφεῖς <εἰς> ἓν τῶν κατὰ τὴν τέχνην, ἔτι δὲ οἱ κναφεῖς ἐμπάπτοντες εἰς τὰ ἱμάτια. διαφέρειν δὲ δοκεῖ καὶ πρὸς τὰ ἀπομάγματα πολὺ τῶν ἄλλων, εἰς ὃ καὶ χρῶνται μᾶλλον καὶ μάλισθ' οἱ περὶ τὴν [68] Ἑλλάδα, γλισχρότητι καὶ λειότητι. ἡ μὲν δύναμις ἐν τούτοις καὶ τοῖς τοιούτοις. ἡ δὲ φύσις ὅμοιον ἀμφοτέρῃ πῶς ἔχειν καὶ τὰ τῆς κονίας καὶ τὰ τῆς γῆς, θερμότητα καὶ γλισχρότητα, μᾶλλον δὲ ἑκατέρας ὑπερεχούσας. θερμότερα γὰρ τῆς κονίας, γλισχροτέρα δὲ πολὺ τῆς γῆς. ὅτι δ' ἔμπυρος κάκειθεν φανερόν. ἤδη γάρ τις ναῦς ἱματηγὸς [69] βρεχθέντων ἱματίων ὥς ἐπυρώθησαν συγκατεκαύθη καὶ αὐτή. ποιοῦσι δὲ καὶ ἐν Φοινίκῃ καὶ ἐν Συρίᾳ καμινεύοντες αὐτὴν καὶ καίοντες· καίουσι δὲ μάλιστα τοὺς μαρμάρους καὶ ἀπλῶς τοὺς στερεωτάτους, βόλιτον παρατιθέντες ἕνεκα τοῦ θᾶπτον καίεσθαι καὶ μᾶλλον. δοκεῖ γὰρ θερμότατον εἶναι πυρωθὲν καὶ πλεῖστον χρόνον διαμένει. ὀπτήσαντες δὲ κόπτουσιν ὥσπερ τὴν κονίαν. ἐκ τούτων δ' ἂν δόξειεν εἶναι φανερόν ὅτι πυρώδης τις ἡ γένεσις αὐτῆς τὸ ὅλον ἐστίν.

De igne

[1] Ἡ τοῦ πυρὸς φύσις ἰδιαιτάτας ἔχει δυνάμεις τῶν ἀπλῶν. ἀήρ μὲν γὰρ καὶ ὕδωρ καὶ γῆ τὰς εἰς ἄλληλα μόνον ποιοῦνται μεταβολὰς φυσικάς, αὐτὸ δὲ αὐτοῦ γεννητικὸν οὐδέν· τὸ δὲ πῦρ γεννᾷν καὶ φθείρειν πέφυκεν αὐτό, γεννᾷν μὲν τὸ ἔλαττον τὸ πλεόν, φθείρειν δὲ τὸ πλεόν τὸ ἔλαττον. ἔτι δὲ αἱ γενέσεις αὐτοῦ αἱ πλείσται [καί] οἷον μετὰ βίας, καὶ γὰρ ἡ πληγῇ τῶν στερεῶν ὥσπερ λίθων, καὶ <αἱ> τρίψει καὶ πλήσει καθάπερ τῶν πυρείων <καὶ πάντων> ὅσα ἔχει φοράς, ὥσπερ τῶν πυρουμένων καὶ τηκομένων (ἐκ δ' αὐτοῦ τοῦ ἀέρος καὶ τοῖς νέφεσι συστροφαι καὶ θλίψεις· βίαιοι γὰρ δὴ αἱ φοραί, δι' ὧν δὴ οἱ πρηστῆρες καὶ κεραυνοὶ γίνονται), καὶ ὅσους δὴ τρόπους ἄλλους τεθεωρήκαμεν εἴθ' ὑπὲρ γῆς γινομένων εἴτ' ἐπὶ γῆς εἴθ' ὑπὸ γῆς. αἱ γὰρ πολλαὶ δόξειαν ἂν αὐτῶν μετὰ βίας.

[2] εἰ δ' ἄρα μὴ τοῦτ', ἀλλ' ἐκεῖνό γε φανερόν, ὅτι πλείστας ἔχει γενέσεις, ὧν οὐδεμία τοῖς ἄλλοις ὑπάρχει οὐδὲ ὅλως ὁ τρόπος οἰκείος, ἀλλὰ πάντων, ὥσπερ ἐλέχθη, φυσικὴ τις μεταβολὴ καὶ γένεσις. διὸ καέκινων μὲν οὐδὲν ἐφ' ἡμῖν ποιεῖν (οὐδὲ γὰρ ὅταν τὸ ὕδωρ ὀρύττωμεν, αὐτὸ ποιοῦμεν ἀλλ' εἰς ἐμφάνειαν ἄγομεν, τὸ κατὰ μέρος μεμερισμένον ἀθροίζόμενοι), τοῦτο δὲ φαίνεται οὐ καθ' ἓνα μόνον τρόπον ἀλλὰ κατὰ πλείστους.

[3] μεγίστη δὲ αὕτη διαφορὰ δόξειεν ἂν· τὰ μὲν γὰρ καθ' αὐτὰ καὶ οὐδὲν ἐν ὑποκειμένῳ, πλὴν <ὅσα μικτά, τὸ δὲ πῦρ ἐν ὑποκειμένῳ,> ὃ γε τῇ περὶ ἡμᾶς αἰσθήσει φανερόν, εἴτ' ἀριθμητέον εἴτε μὴ ἀριθμητέον εἰς τὸ αὐτὸ <τὸ> φῶς. εἰ μὲν γὰρ καὶ τὸ φῶς, φανερόν ὡς ἐν ἀέρι γε τοῦτο καὶ ὕδατι· εἰ δὲ μή, <τὸ> πῦρ τό γε τῆς φλογὸς καὶ τοῦ ἀνθρακος <ἐν> ὑποκειμένῳ. ἡ μὲν γὰρ καπνὸς καιόμενος, ὃ δὲ γεῶδές τι καὶ στερεόν. ὁμοίως δὲ καὶ τὰ ἐν τοῖς μεταρσίοις ἐκπυρούμενα καὶ τὰ ἐν τῇ γῇ. πάντα γὰρ ἢ ἀέρος πύρωσις ἢ ἀέρος ἅμα καὶ ὕγρου καὶ γεώδους (ἢ πάντων ἥτοι δυοῖν). ἀπλῶς δ' αἰεὶ καὶ πᾶν καιόμενόν τι καὶ ὥσπερ ἐν γενέσει καθάπερ ἡ κίνησις, διὸ καὶ γινόμενον φθείρεται πῶς καὶ ἅμα τῷ ὑπολείπειν τὸ καυστὸν καὶ αὐτὸ συναπόλλυται.

[4] τοῦτο γὰρ ἦν καὶ τὸ παρὰ τῶν παλαιῶν λεγόμενον, ὅτι τροφήν αἰεὶ ζητεῖ τὸ πῦρ ὡς οὐκ ἐνδεχόμενον αὐτὸ διαμένειν ἄνευ τῆς ὕλης. <διὸ> καὶ ἄτοπον φαίνεται πρῶτον αὐτὸ λέγειν καὶ οἷον ἀρχήν, εἰ μὴ οἷον τ' εἶναι χωρὶς ὕλης. οὔτε γὰρ ἀπλοῦν οὔτω γε οὔτε πρότερον τοῦ ὑποκειμένου καὶ τῆς ὕλης, εἰ μὴ τις ἐν αὐτῇ τῇ πρώτῃ σφαῖρα τοιαύτη φύσις, ὥστε ἄμικτον εἶναι θερμότητα καὶ καθαρὰν. οὔτω δὲ οὐκ ἂν ἔτι καίτοι. πυρὸς δ' αὕτη φύσις, πλὴν εἰ ἄρα γε

πλείους καὶ διάφοροι καὶ ἡ μὲν πρώτη καθαρὰ καὶ ἄμικτος, ἡ δὲ περὶ τὴν τῆς γῆς σφαῖραν μεμιγμένη καὶ ἀεὶ κατὰ γενέσιν. ἡ δ' ἀρχὴ πότερον ἀπ' ἐκείνης αὐτῷ τῆς γενέσεως ἢ ἀπὸ τῶν ὑποκειμένων, ὅταν ἐν κινήσει τοιαῦδε καὶ διαθέσει πρὸς ἄλληλα γένηται, καθάπερ ἀρτίως ἐλέγομεν, «ἢ» ἀπ' ἀμφοῖν;

[5] καὶ γὰρ ἡ κίνησις ἡ τοιαῦδε καὶ ἡ ἀλλοιώσις εἰς τὴν τοῦ θερμοῦ πῶς ἀνάγεται φύσιν· ὁ γὰρ ἥλιος ὁ ταῦτα πάντα δημιουργῶν. πάλιν δ' ἡ τοῦ ἡλίου φύσις εἰ μὲν τοῦ πυρὸς τις ἰδέα, πλείστην ἂν αὕτη καὶ μεγίστην ἔχει διαφορὰν ἀρχὴ τις οὕσα καὶ πρὸς ἅπαντα ἤκουσα. καὶ γὰρ τὸ φῶς ἀπὸ τούτου καὶ ἡ γόνιμος ἐν τοῖς ζῴοις καὶ φυτοῖς θερμότης, ἔτι δὲ ἡ τοῦ γεώδους τούτου καὶ καιομένου πυρὸς δυνατὴ διὰ τούτου γίνεσθαι. πολλοὶ γ' οὖν καὶ ἐξάπτοντες ὑπολαμβάνουσι εἶναι τὴν αὐγὴν ἀπὸ τοῦ ἡλίου.

[6] εἰ δὲ μὴ ἐστὶ πῦρ μηδὲ πυρὸς φῶς, αὐτὸ μὲν τοῦτο θαυμαστὸν καὶ λόγου δεῖται. εἰ δὲ μήθ' ὑπὸ τούτου καὶ διὰ τοῦτον ἡ θερμότης, ἐκεῖνο δὲ φανερόν, ὡς ἐν ὑποκειμένῳ τινὶ καὶ τὸ πῦρ καὶ [ὁ ἥλιος] τὸ θερμόν. ἄτοπον δὲ καὶ τοῦτο πάλιν, εἰ ἡ ἀρχὴ καὶ τὸ πρῶτον ἐν ὑποκειμένῳ· τὸ γὰρ θερμόν καὶ ἡ τούτου δύναμις ἀρχή. κοινότερον γὰρ τοῦτο καὶ ἐπὶ πλείῳ διήκει καὶ κυριώτερον ἀλλοιώσεως καὶ φυσικῆς γενέσεως, τὸ δὲ πῦρ, ὡς εἴρηται, γεννητικὸν μὲν αὐτοῦ, φθαρτικὸν δὲ ὡς ἐπὶ πᾶν τῶν ἄλλων. ὅθεν καὶ δῆλον ὡς ἑτέρα τις φύσις πυρὸς καὶ θερμοῦ.

[7] πῦρ δὲ λέγομεν ὅταν ἐν τῷ γεώδει καὶ ἀερῶδει τῆς ξηρᾶς ἀναθυμιάσεως καυστικὴ γένηται θερμότης, ἥνπερ οὐχ οἷόν τ' ἐν τοῖς ὑγροῖς ὑπάρχειν, πλὴν ὥσπερ σάρκα λέγομεν καίειν. ἀλλὰ γὰρ ταῦτα ἔοικεν εἰς μείζω τινὰ σκέψιν ἐκφέρειν ἡμᾶς τῶν ὑποκειμένων, ἡ ζητεῖ τὰς πρώτας αἰτίας.

[8] φαίνεται γὰρ οὕτω λαμβάνουσι τὸ θερμόν καὶ τὸ ψυχρὸν ὥσπερ πάθη τινῶν εἶναι καὶ οὐκ ἀρχαὶ καὶ δυνάμεις, ἅμα δὲ καὶ ἡ τῶν ἀπλῶν λεγομένων φύσις μικτὴ τις καὶ ἐνυπάρχουσα ἀλλήλοις. ὥσπερ γὰρ οὐδὲ τὸ πῦρ ἄνευ ἀέρος ἢ ὑγροῦ τινος καὶ γεώδους εἶναι δυνατόν, οὕτως οὐδὲ τὸ ὑγρὸν ἄνευ πυρὸς οὐδὲ τὴν γῆν ἄνευ ὑγροῦ. σημεῖον δέ· τὸ μὲν γὰρ πηγνυται διὰ τὴν ἐκθλιψιν, ἡ δ' οὐκ ἂν συμμείνειεν ἀπολιπόντος πάντη καὶ πάντως τοῦ ὑγροῦ. διὸ ταῦτα μὲν φαίνεται κοινὰ καὶ δεόμενα διορισμοῦ, πῶς ποτε χρὴ τὰ ἀπλὰ λέγειν.

[9] τὰ δὲ τούτων πρότερα «μὴ» μιχθέντα μείζους ἔχει ζητήσεις, ὥσπερ εἵπομεν. ἐκεῖνο δ' ἐξ ἀπάντων φανερόν, ὡς ἡ τοῦ πυρὸς φύσις ἰδιαιτάτας ἔχει καὶ πλείστας δυνάμεις, καθάπερ ἐν ἀρχῇ τῶν λόγων ἐλέχθη. καὶ γὰρ αὐτὸ τὸ πολυειδὲς αὐτοῦ καὶ διελημμένον ἐν ἅπασιν τοῖς τόποις ἰδιότητα μηνύει τῆς

φύσεως. οὐδὲν γὰρ δὴ τῶν ἄλλων οὐθ' οὕτω πολυειδὲς οὐτ' ἀνώμαλον ταῖς δυνάμεσιν οὐδ' αὐτῇ τῇ φύσει διάφορον οὔτε διῆκον εἰς πάντας καὶ καταμεμερισμένον τοὺς τόπους.

[10] ἀφέντας δ' οὖν τὰ μείζω καὶ τὰ πρότερον πειρατέον ὑπὲρ τῶν ἐλαττόνων λέγειν ἀρξαμένους ἀπὸ τῆς γενέσεως αὐτοῦ καὶ φθορᾶς [ἦν ὅφ' αὐτοῦ ποιεῖται]. ληπτέον δὲ εἰς ταῦτα τὸ μικρῷ πρότερον εἰρημένον, ὃ καὶ τῇ αἰσθήσει φανερόν, ὥς ἐν ὑποκειμένῳ πως ἡ φύσις αὐτοῦ καὶ τὸ ὅλον ἀλλοιουμένῳ καὶ πάσχοντι. τούτου γὰρ τεθέντος εὐλογος ἤδη καὶ ἡ γένεσις καὶ ἡ φθορά. γεννᾷ μὲν γὰρ τῷ ἐπὶ πλέον ἀεὶ προιέναι ἐξισοῦν καὶ ἐξομοιούμενον, συμβαίνει δὲ καὶ ἀπόλειψίν τινα αὐτοῦ γίνεσθαι καταναλισκομένης γε τῆς ὑγρότητος τῶν πρότερον πυρουμένων. φθείρει δέ, ὅταν πλήσιον τεθῇ, τὸ πλέον τὸ ἐλαττον εἴτε τὴν τροφήν ἀφαιρούμενον εἴτε οὖν ξηραῖνον τὴν ἀρχὴν καὶ καταμαραῖνον τῷ ὑπερισχύειν. οὔτε γὰρ ἄνευ ὑγρότητος οὐδὲν καυστὸν οὔτε ταύτης ἐνυπαρχούσης ἐὰν μὴ ἔχῃ δύναμιν τὴν ἐργασομένην.

[11] ὁμοίως δὲ καὶ ἡ ὑπὸ τοῦ πνιγέως σβέσις. καὶ γὰρ ἐνταῦθα συναθροισθὲν τῷ «μὴ» ἀπορρεῖν «τὸ» θερμὸν ἐκμαραίνει καὶ ξηραίνει τὴν ἀρχὴν ὥσπερ ἂν θλίψιν τινὰ ποιοῦν καὶ ἀποπίεσιν (διὸ καὶ οὐκ ἀμαθῶς τοῦνομα τὸ καταπνίγεσθαι τὸ πῦρ). καὶ γὰρ ὅλως ὁ ἀήρ πυκνωθεὶς δύναται ἂν τοῦτο δρᾶν, καὶ πυρωθεὶς ἔτι μᾶλλον καὶ θάττον. διὰ τὰς αὐτὰς δὲ καὶ παραπλησίους αἰτίας καὶ ἐν τῷ ἡλίῳ τὸ πῦρ ἦττον καίεται ἢ ἐν τῇ σκιᾷ, καὶ οἱ λύχνοι φαίνουσιν ἦττον καιομένου πυρός. καὶ ἀποσβέννυται ὅλως, ἐὰν ὑπὲρ τῆς φλογὸς τεθῇ. καὶ γὰρ ἐνταῦθα καταμαραίνει τε καὶ κωλύει τὴν ἀρχὴν τὸ πλέον.

[12] ἀντικειμένως δὲ τούτῳ διὰ τὴν αὐτὴν καὶ παρομοίαν αἰτίαν καὶ τὰ καιόμενα θάττον κατακαίεται χειμῶνος ἢ θέρους. ἀσθενέστερον γὰρ ποιεῖ τὸ πῦρ τὸ θέρος ὥσπερ καὶ ὁ ἥλιος, καὶ αὐτὸ τὸ πῦρ τὸ φῶς, ὃ δὲ χειμῶν καὶ τὸ «τοῦ» πέριξ [καὶ τὸ τοῦ] ἀέρος ψυχρὸν ἀθροίζει· συνηθροισμένον δὲ πᾶν ἰσχυρόν (διὸ καὶ «τὸ» ἐν τοῖς λαμπτήρσι φῶς ἐπὶ πλέον φαίνεται). ὅλως δὲ συνεστηκυῖα καὶ ἀθρόος ἡ δύναμις ἅπαντος ἰσχυροτέρα καθάπερ τοῦ βάρους· ὥσπερ γὰρ μείζων γίνεται.

[13] πολλὰ δὲ τοιαῦτα ἐπὶ τοῦ θερμοῦ λαβεῖν ἔστιν· οἷον καὶ τὰ ἀλειπτήρια καὶ τὰ βαλανεῖα θερμότερα καὶ χειμῶνος ἢ θέρους καὶ βορείοις ἢ νοτίοις. συνέσταλται γὰρ ἐν τῷ χειμῶνι καὶ συγκατακέκλεισται τὸ θερμὸν ὑπὸ τοῦ πέριξ ἀέρος. καὶ τὰ σώματα πέττει τὰς τροφὰς μᾶλλον καὶ ὅλως ἰσχυρότερα

τοῖς χειμῶσιν ἔστιν, ὅτι συνήθροισται καὶ ἀντιπεριέστηκε τὸ θερμόν.

[14] ἐκ ταύτης δὲ τῆς αἰτίας καὶ τὸ ψυχρὸν ἐνιαχοῦ δοκεῖ τὸ αὐτὸ ποιεῖν τῷ θερμῷ, καὶ ἀπλῶς καὶ ταῖς ὑπερβολαῖς. πέττειν τε γάρ φασι τοὺς καρποὺς τὰ ψύχη καὶ ἀποκαίειν καὶ τὸ καῦμα καὶ τὸ ψῦχος, οὐκ ἀληθῆ λέγοντες. ἀποκαίει γὰρ οὕτω καὶ πέττει τὸ ψῦχος οὐ προηγουμένως ἀλλὰ κατὰ συμβεβηκός, ὅτι συστέλλει καὶ συνάγει τὸ θερμόν [ἐπὶ] τὸ ἐργαζόμενον ἐκεῖνο, πλέον δὲ ὄν καὶ ἰσχυρὸν μᾶλλον.

[15] ἡ αὐτὴ δ' αἰτία καὶ ὅτι τοῖς λειποψυχήσασι ψυχρὸν ὕδωρ προσχέουσι ψυχροῦ τοῦ πάθους ὄντος. συνάγει γὰρ καὶ ἐξίεναι κωλύει τὸ θερμόν ἐμφράττον τοὺς πόρους καὶ καταψύχον τὸ πέριξ. ἀθροῖσαι γὰρ τοῦτο δεῖ καὶ ἀνακαλέσασθαι. διὸ καὶ κατέχειν τινὲς κελεύουσι τὸ πνεῦμα τὸν ἐκλυόμενον. ἅμα γὰρ διαθερμαίνεται καὶ τὸ ἐντὸς καὶ ὁ ἰδρῶς ἐκπίπτων λύει τὴν λειποθυμίαν. ψύχεται δὲ καὶ τὰ θερμὰ ἦττον ἐν τῇ σκιᾷ ἢ ἐν τῷ ἡλίῳ διὰ τὸ ψυχρότερον εἶναι τὸ περιεστηκός. [ἐκ]θλίβεται γὰρ μᾶλλον τὸ θερμόν.

[16] καὶ τὰ ὕδατα τὰ ἐκ τῆς γῆς δὲ θερμότερα τοῦ χειμῶνος ἢ τοῦ θέρους διὰ τὴν αὐτὴν αἰτίαν· ἔνια γὰρ καὶ ἀναζεῖ μᾶλλον. τὸ δὲ θερμαινόμενον ὕδωρ οὐχ ὁμοίως ὑπερζεῖ καὶ τοῦ θέρους (μᾶλλον θερμαινόμενον ὡς εἰπεῖν), ὅτι τὸ ὑπερζεῖν ἔστιν ἀναβολὴ τῶν πομπολύγων. αὗται δ' οὐχ ὁμοίως αἶρεσθαι δύνανται διὰ τὴν ψυχρότητα τοῦ περιέχοντος ἀέρος (θλίβει γὰρ οὗτος καὶ ὥσπερ ἐπικόπτει), διὸ καὶ ταχὺ συμπίπτουσι καὶ ἅμα τῷ τε πληθῇ καὶ τοῖς ὄγκοις ἐλάττους γίνονται· τοῦ δὲ θέρους ἀνάπαλιν.

[17] ὅτι δὲ ἰσχυρὸν <τὸ ψυχρὸν> εἰς τὸ συναγαγεῖν καὶ συναθροῖσαι τὸ θερμόν, σημεῖον καὶ τὰ τηκόμενα καὶ τὰ ῥηγνύμενα τῶν ἐλατῶν καὶ χυτῶν (<καὶ γάρ φασιν> καττίτερον καὶ μόλιβδον ἤδη τακῆναι ἐν τῷ Πόντῳ πάγου καὶ χειμῶνος ὄντος νεανικοῦ, χαλκὸν δὲ ῥαγῆναι. τοῦτο δὲ δῆλον ὡς διὰ τὸ ἐκπνευματωθῆναι τὴν ὑγρότητα συστελλομένου καὶ συνιόντος τοῦ θερμοῦ, τὸ γὰρ πνεῦμα διεκπίπτον ποιεῖ τὴν ῥῆξιν.)

[18] καὶ <ἡ> ὑπὸ χιόνος δὲ τῆς γῆς ἀναζύμωσις καὶ γένεσις ἐν αὐτῇ τῇ χιόνι ζῶων ἐνίων. ἀπλῶς δὲ καὶ ἡ μεταβολὴ τῶν ἐν τῇ γῇ πάντων ἀπ' αὐτῶν ἀρξαμένοις τῶν ὑδάτων, ἐπεὶ καὶ ἡ ἀναθυμίασις καὶ ὁ ἀτμὸς πλείων οὐ μόνον διὰ τὴν παρουσίαν ἀλλὰ καὶ διὰ τὸν ἀθροισμὸν τοῦ θερμοῦ καὶ διὰ τὴν ἀντιπερίστασιν ἅμα καθυγραινομένης. τοῦτο μὲν οὖν φανερόν ἐκ πολλῶν ὅτι καὶ ἰσχύει μᾶλλον ἠθροισμένον, καὶ ἀσθενέστερον γίνεται διακεχυμένον.

[19] ἐν δέ τι τῶν ὑπὸ τοῦτο καὶ τὸ διαμένειν ἐστὶ τὸ πῦρ ἐγκρυφθέν. περιστέγει γὰρ ἡ τέφρα καὶ κωλύει τὸν ἀέρα τὸν ἔξωθεν προσπίπτοντα

σβεννῶναι (σβεννύει γὰρ τὸ ψυχρὸν) καὶ τὴν ἀπορροὴν μὴ γίνεσθαι τὴν τοῦ πυρὸς (καὶ γὰρ οὕτως ἐκμαραίνεται καταναλισκόμενου τοῦ ὕγρου) μηδ' αὐτήν, εἴ τις ἄρ' ἐστὶ, συναθροίζεσθαι καθάπερ πρὸς τοῦ πνιγέως ἀλλ' ἔχειν δίοδον ἱκανήν. τὸ δὲ δοκοῦν ὑπεναντίον εἶναι τούτῳ, διότι μὴ ἐγκρυφθὲν θάπτον φθείρεται μὴ ἀφαιρούντων τὴν τέφραν ἢ ὑφαιρούντων, οὐκ ἔστιν ὑπεναντίον. διὰ γὰρ τὴν ὀλιγότητα τὴν αὐτῆς οὔτε κωλύειν δύναται τὸν ἀέρα προσπίπτειν οὔτε πάλιν εἰς τὴν ἀπορροὴν ἰέναι τοσαύτην, ὥστε ἀμύνεσθαι καὶ κρατεῖν τοῦ προσπίπτοντος, ὅπερ, εἰ γυμνὸν ἦν, ἐποίει ἂν μᾶλλον· ὥστε εὐλόγως καταναλίσκεται θάπτον.

[20] φθοραὶ γὰρ πυρὸς πλείους, ἢ μὲν ὥσπερ φυσικὴ τις ἐξανάλισκόμενου τοῦ ὕγρου καὶ ἀπλῶς τοῦ καυστοῦ (τότε γὰρ ὥσπερ φθίνει καὶ μαραίνεται), αἱ δ' ἐκ τῶν ἔξωθεν, ὧν ἓν μὲν τι γένος αἱ ὑπὸ τῶν ὁμογενῶν, ἃς ὀλίγῳ πρότερον εἵπομεν, ἄλλαι δὲ ὑπὸ τοῦ ψυχροῦ καὶ ὕγρου μᾶλλον οἰκεῖται δόξασαι τῶν ὑπὸ τοῦ ὁμογενοῦς. τὰ γὰρ ἐναντία φθαρτικὰ φύσει τῶν ἐναντίων·

[21] διὸ δὴ καὶ ἡ προσπίπτουσα ψυχρότης εἰς τὸ τετεφρωμένον πῦρ σβέννυσιν, ἢ δ' ὑγρότης καὶ θερμὴ καὶ ψυχρὰ οὔσα διαδύεται καὶ καταφθείρει τὴν ἀρχήν, ἐπεὶ καὶ ἡ φύσει καυστὴ καθάπερ ἡ λιπαρὰ πλείων ἐπιρρέουσα τῆς ἱκανῆς, ἔτι τοῦ γε φλογώδους καὶ ὑπὸ πνεύματος μεγέθους (καὶ γὰρ οὕτω σβέννυται) φθειρομένου καὶ οὐχ ὥσπερ κατισχυομένου τῇ μείζονι κινήσει ἀλλὰ τρόπον τινὰ καταφθειρομένης καὶ ἐνταῦθα τῆς ἀρχῆς.

[22] διὸ καὶ ὅταν ἐπιτεθῇ τι τοῖς λύχνους, ἤττον σβέννυνται, καὶ οὓς γε δὴ νῦν ποιοῦσι τοὺς χαλκοὺς, οἷς ἐπὶ τῶν λαμπτήρων χρῶνται, τὸ ὅλον οὐδὲ σβέννυνται, πλὴν ἐὰν ἔκτοπόν τι γένηται πνεῦμα. οὐ γὰρ ἔχοντες οὐδαμοῦ παρείσδυσιν, οὐχ ἄπτονται τῆς ἀρχῆς. ἕως δ' ἂν αὕτη μένη καθάπερ ὕδατος πηγῇ, μένει καὶ ἡ φλόξ.

[23] σβέννυνται δὲ καὶ ἐὰν τις ἀποστεγάσῃ πανταχῇ καὶ ἐὰν μηδεμίαν ἀναπνοὴν διδῷ, διὸ καὶ ἐν τῇ τέφρᾳ ἐγκρύπτουσι τοῦτ' εὐλαβούμενοι. κωλύμενον γὰρ ἀπορρεῖν αὐτὸ ἐν αὐτῷ φλίσβεται. καὶ ἐὰν τις καταθλίβῃ τοὺς δαλοὺς ἢ τοὺς ἄνθρακας ὥσπερ καὶ τοὺς λύχνους, ἀποσβέννυσιν. ἐπεὶ καὶ ὁ ἐν τοῖς μετάλλοις λύχνος διὰ τοιαύτην τινὰ αἰτίαν σβέννυται. παχὺς γὰρ ὧν ὁ ἀήρ καὶ ἀκίνητος οἷον καταπιέζει καὶ θλίβει καθάπερ εἴ τι στερεόν, <ὄν> οὐ δύναται διαβιάσασθαι τὸ πῦρ. κενὸν γὰρ δὴ ζητεῖ, πρὸς ὃ καὶ ἐν ᾧ ἡ φορά.

[24] διὰ τοῦτο δὲ καὶ τὸν πνιγμὸν ποιεῖ τοῖς ἐργαζομένοις ὁ ἀήρ, ὅτι παχὺς τε καὶ ἡρεμῶν. οὐ γὰρ διαδίδωσι τῇ ἐκπνοῇ. διὸ καὶ τὰ ψυχαγωγεῖα ποιοῦσιν, ὅπως λεπτύνηται τῇ κινήσει καὶ ἅμα μεταβάλλων διδῷ χώραν. ὅτι δὲ ὁ παχὺς

δύσπνους, φανερόν μὲν καὶ ἀπλῶς λεχθέν, οὐ μὴν ἀλλὰ καὶ ὅτι ὀμιχλώδης καὶ θολερώδης, διαμαρτυροῦσι. καὶ τούτων μὲν τοιαύτας ἂν τις ὑπολάβοι τὰς αἰτίας.

[25] ὅτι δ' ἡ ἀρχὴ φθειρομένη κυριωτάτη πρὸς τὴν σβέσιν, κάκεῖθεν φανερόν. τὴν γὰρ πίτταν καιομένην τὸ μὲν ὕδωρ οὐ σβέννυσι, τὸ δ' ἔλαιον σβέννυσιν, ὅτι διαδύεται λεπτότερον ὄν πρὸς τὴν ἀρχήν. καίτοι μάλιστα εὐκαυστον. ἀλλ' ὅτε ἂν ἀπολάβῃ καὶ φλίψῃ ταύτην, ἔσβεσεν ὥσπερ καὶ τοὺς λύχνους πλέον ἐπιρρυνέν. πάλιν δὲ τὸ ὄξος σβεστικώτερον τοῦ ὕδατος καὶ διὰ τὴν αὐτὴν αἰτίαν θερμώτατον ὄν τῶν λοιπῶν. εἰσδύεται γὰρ μάλιστα καὶ πλεῖστον, ὥστε θιγγάνειν τῆς ἀρχῆς. οὐ γὰρ ἦ ψυχρὸν σβέννυσι πάντως τὸ ὑγρόν (τοῦτο δὲ δηλὸν ὅτι καὶ τὸ ζέον ὕδωρ), ἀλλ' ἦ τὴν ἀρχὴν ἐπικλείει καὶ καταλαμβάνει.

[26] συντεθέντα μὲν οὖν ἅμφω, τὸ θ' ὑγρόν καὶ τὸ ψυχρόν, μᾶλλον φθείρει (γίνεται γὰρ τοῖς ἐναντίοις ὑπὸ τῶν ἐναντίων ἢ φθορά· τὸ γὰρ πῦρ θερμὸν καὶ ξηρόν), οὐ μὴν ἀλλὰ καὶ χωριζόμενον ἐκάτερον φθαρτικόν. ὁ μὲν γὰρ ἄηρ, ἦ ψυχρός, σβέννυσι, τὸ δ' ὕδωρ, ἦ ὑγρόν. καὶ αὗται μὲν εἰκότα ὥσπερ φυσικαῖς τισι, τοῖς ἐναντίοις ὑπὸ τῶν ἐναντίων γινόμεναι, ἢ δ' ὑφ' ἑαυτοῦ καθάπερ εἰ παρὰ φύσιν. οὐκ ἔστι δὲ παρὰ φύσιν τὸ τὴν ἐλάττω κρατεῖσθαι δύναμιν ὑπὸ τῆς μείζονος.

[27] φθείρει δὲ καὶ τὰ οἰκείως φθαρτικὰ ταῖς ὑπερβολαῖς, ἐπεὶ μέχρι γέ του συναύξει λαμβάνοντα συμμετρίαν, οἷον τὸ μὲν ὑγρόν αὐτὸ καιόμενον, τὸ δὲ ψυχρὸν συνθλίβον ἰσχυρότερον ποιεῖ, τὸ δὲ πνεῦμα τῇ κινήσει συνεκκαίει καὶ ζωπυρεῖ (διὸ καὶ οἱ λύχνοι πλέον ἔλαιον ἀναλίσκουσιν ἐν τοῖς πνεύμασιν, καὶ τὰ ξύλα θάττον κατακαίεται σφοδροτέρας καὶ πλείονος τῆς κινήσεως γινομένης). ἢ δὲ μείζων καὶ ἀσύμμετρος ἀπέσβεσε.

[28] καὶ διὰ τοῦθ' ὁ μὲν λύχνος ἀποσβέννυται φυσώμενος, τὰ δὲ ξύλα καὶ οἱ ἄνθρακες ἐκκαίονται. τῷ μὲν γὰρ οὐκ ἔστι σύμμετρον πνεῦμα λαβεῖν (ἅμα δὲ καὶ εὐκαυστον ἔχων τὸ πυρούμενον οὐ δεῖται τῆς ἐξωθεν πνοῆς· τό τε γὰρ ἐλλύχνιον ἅτε μανὸν καὶ ξηρὸν ὄν) ἐφέλκεται τὴν ὑγρότητα, καὶ τὸ ἔλαιον αὐτὸ καιόμενον), ὁ δ' ἄνθραξ καὶ τὸ ξύλον οὐ δύναται καίεσθαι μὴ φυσώμενα διὰ τὸ γεῶδες καὶ στερεόν. οἱ γὰρ πόροι πυκνοὶ τῶν τοιούτων πάντων, οὓς διοίγει καὶ ὀδοποιεῖ τῷ πυρὶ τὸ πνεῦμα, καὶ ὅσῳ ἂν εἰς πλείω καὶ ἐλάττω μεμερισμένα προσπίπτῃ, μᾶλλον.

[29] διὰ τοῦτο καταγνύντες τοὺς ἄνθρακας ἐνίοτε καὶ προσάγοντες ἀλλήλοις φυσῶσιν (ἐκ μικρῶν γὰρ συνιόντων ὥσπερ ναματίων καὶ ἡ φλόξ γίνεται, διὸ

καὶ τὰ πυρεῖα τῇ τρίψει τὸ αὐτὸ τοῦτο ποιεῖ, καὶ τοῖς ξύλοις ὑπεκκαύματα λεπτὰ προσβάλλοντες φουσῶσι [τοὺς ἄνθρακας]. καὶ αὐτὸς δὲ ὁ ἄνθραξ φουσώμενος μᾶλλον καὶ θάπτον ἐκκαίει καθάπερ ἐν τοῖς χαλκείοις. <διὸ> τοῦτο μὲν οὖν οὐκ ἂν ἀλόγως δόξειε συνεργεῖν πνεύματι πνεῦμα. καὶ γὰρ τὸ πῦρ οἶον πνεύματός τις φύσις.

[30] ἐπεὶ δὲ πλείω καὶ ἀεὶ διαφέροντα τὰ καυστὰ καὶ πυρωτά, διὰ τοῦτο καὶ αἱ δυνάμεις αὐτῶν διάφοροι, καὶ οὐχ ἅπερ θάτερον δύναται καὶ θάτερον ποιεῖν οἶον ὁ ἄνθραξ φωτίζειν ὥσπερ ἡ φλόξ, οὐδ' αὕτη καὶ ὁ λύχνος ὁμοίως, οὐδ' αὖ οὗτός γ' ἐκκαίων καὶ αὐαίνων, ἀλλ' ὅσῳ δὴ καθαρωτέρα τοσοῦτω μᾶλλον, οὐκ ἔχουσα γεῶδες οὐδὲ ὕδατῶδες οὐδὲν αὐτῇ τὸ ἀντιφράττον, ἐξ ὧν ὁ καπνὸς καὶ ἡ ἀναθυμίασις.

[31] διὰ τοῦτο γὰρ καὶ ἡ τῶν χλωρῶν ἐρυθροτέρα φλόξ ἢ τῶν ξηρῶν, ὅτι πλέον ἔχει τὸ τοιοῦτον, δι' οὗ διαφανομένη λαμβάνει τὴν χροίαν ὥσπερ καὶ ὁ ἥλιος, ὅταν ἦ παχὺς ὁ ἀήρ. ὁ δ' ἄνθραξ οὐδὲ ποιεῖ φλόγα πλὴν ὀλίγην διὰ τὸ μὴ ἔχειν τὴν ἐξαερουμένην πολλὴν ὑγρότητα· πυρουμένη γὰρ αὕτη φλόξ.

[32] οὕσης δὲ τῆς εἰρημένης ἀνωμαλίας εὐλογον ἤδη καὶ τὸ θερμαίνειν ἔνια μᾶλλον καὶ θάπτον, <ἥττον> ὄντα θερμὰ (καθάπερ ἡ τοῦ καλάμου φλόξ καὶ τὸ ὕδωρ καὶ τοὺς ἀνθρώπους τῆς ἀπὸ τῶν ξύλων, καίτοι θερμότατόν γε πῦρ ὅλως τὸ ἀπὸ τῶν στερεωτάτων, ὁ δ' ἄνθραξ ἥκιστα θερμαίνει στερεώτατος ὢν) καὶ τὴν μὲν τοῦ ἡλίου θερμότητα μελαίνει τὰ σώματα, τὴν δὲ τοῦ πυρὸς μὴ.

[33] πάντων δὲ τούτων καὶ τῶν τοιούτων αἰτιάσαιτ' ἂν τις τὴν λεπτότητα καὶ τὴν παχύτητα· θερμαίνει τε γὰρ τὴν σάρκα καὶ τὸ ὕδωρ ἢ τῶν καλάμων τάχιστα διὰ τὴν λεπτότητα καὶ πυκνότητα (λεπτὴ μὲν γὰρ ὅτι κοῦφος, πυκνὴ δὲ ὅτι συνεχής· τὸ δὲ λεπτὸν διαδυτικόν, καὶ τὸ θερμαίνεσθαι διὰ τὴν συνεχὴ κατάμιξιν) ἢ τε φλόξ ὅλως τῶν ἀνθράκων μᾶλλον διὰ τοῦτο, καὶ ἅμα πλείων ἢ ἀπορροὴ <καὶ> ἀθροωτέρα.

[34] τὸ δ' ὅλον οὐ διὰ τῶν αὐτῶν ἴσως ἐκάτερον θερμαντικόν. εἰ δὲ μή, οὐχ ὡσαύτως γ' ἔχον οὐδ' ὁμοίως ἐκάτερον, ἀλλ' ἄνθραξ μὲν ὁ στερεώτατος, φλόξ δ' ἡ λεπτοτάτη καὶ πυκνοτάτη. θερμαίνει μὲν οὖν ἡ φλόξ διὰ ταῦτα μᾶλλον ἔνια, κατακαίει δὲ πάλιν οὐχ ὁμοίως, ὅτι λεπτοτέρα καὶ ἀσθενεστέρα, τὸ γὰρ ἐν τῷ γεῶδει καὶ στερεῷ πῦρ θερμότατον οὐκ ἀπορρέον ὁμοίως ἀλλ' ἀποστεγόμενον ὑπὸ τῆς πυκνότητος ἔχον τε τὸ καυστὸν σωματωδέστερον διὰ τὴν πυκνότητα καὶ σκληρότητα.

[35] <διὸ καὶ τοιαῦτα θερμότατα πυρωθέντα καθάπερ σίδηρος, χαλκός, λίθος, ὄστρακον, ἃ τῇ φύσει σχεδὸν ψυχρότατα. στέγει γὰρ ἐν αὐτοῖς μάλιστα

καὶ τηρεῖ τὸ θερμόν, ὥστε εὐλόγως καυστικώτατα τῆς σαρκός. ἅμα δὲ καὶ ἡ τῆς φλογὸς φορὰ ποιεῖ τινα παραλλαγὴν. διὸ καὶ οἱ κινεῶντες ἐν τῇ φλογὶ τὰς χεῖρας ὀξέως οὐ κατακαίονται, θάπτων γὰρ ἡ κίνησις τῆς χειρὸς οὔσα καὶ ἅμα μεταλλάττουσα τὰ μέρη κωλύει τὴν κατάκαυσιν (οὐ γὰρ καίει, εἰ μὴ ἐπιμένει τὸν ἱκανὸν χρόνον· διὰ τοῦτο καὶ οἱ ἐν τῷ ἡλίῳ βαδίζοντες ἦττον καίονται τῶν καθημένων καὶ οἱ τρέχοντες ἔτι τούτων), ἅμα δ' ἴσως τούτοις γε καὶ ἡ ὑπὸ τῆς κινήσεως τοῦ ἀέρος γινομένη «φορὰ» ποιεῖ τινα κατάψυξιν.

[36] ἔχει δὲ καὶ πρὸς τὰς τήξεις καὶ πρὸς τὰς ἐψήσεις καὶ τὰ ἄλλα τὰ τοιαῦτα μεγάλας ἑκάστα πῶς τὰ ὑποκείμενα διαφορὰς οἶον φλογὸς μαλακῆς ἢ θερμότητος μὴ σκληρᾶς ἢ πάλιν ὀξεῖας καὶ σφοδρότερας καὶ ἀθροωτέρας. ἀπὸ μὲν γὰρ τῶν μαλακῶν καὶ μανῶν μαλακώτερον τὸ θερμόν, ἀπὸ δὲ τῶν σκληρῶν καὶ πυκνῶν σφοδρότερον.

[37] διὸ καὶ οἱ ἱατροὶ τοὺς ἥλους καίουσι τῷ οἴῳ· μαλακωτάτη γὰρ ἡ ἀπὸ τούτου θερμότης. ὁμοίως δὲ καὶ ἐν ταῖς πυριάσεσι καὶ τοῖς ἀλείμμασιν, ἀπὸ τοιούτων γὰρ ζητοῦσι τὰς θερμότητας. σχεδὸν ὁμοίως δὲ καὶ αἱ ἄλλαι τέχναι. κατὰ λόγον «γὰρ» αἷς μὲν ὥσπερ μάλαξις ἢ τήξις ἢ καὶ διάλυσίς τις κατὰ μικρὸν, τὴν λεπτὴν διώκουσι καὶ μαλακὴν, αἷς δ' ὥσπερ βιαιοτέρα τις χρήσις ὥσπερ τῇ χαλκευτικῇ τὴν σφοδροτάτην. διὸ καὶ τοὺς ἄνθρακας τοὺς γεωδεστάτους καὶ πυκνοτάτους λαμβάνουσι καὶ ἐνίους γε στιπτοὺς ποιοῦσιν ἔνεκα τῆς ἰσχύος καὶ ἔτι ταῖς φύσαις χρῶνται. σφοδροτέρα γὰρ οὕτως ἡ θερμότης καὶ ἀθροωτέρα συνεκκαίοντος τοῦ πνεύματος.

[38] ἐν τούτῳ δ' οὖν τῷ γένει καὶ ἐκεῖνο τὸ ἀπορούμενον, διὰ τί ὁ μὲν ἥλιος μελαίνει τὴν σάρκα, τὸ δὲ πῦρ οὐ. συμβαίνει γὰρ τὴν μὲν τοῦ ἡλίου θερμότητα λεπτὴν οὔσαν «καὶ» μαλακὴν εἰσάγεσθαι κατὰ μικρὸν εἰς τοὺς πόρους καὶ ὥσπερ ἀναθυμιᾶν καὶ ἐπικαίειν τὰ ἐπὶ πολλῆς (διὸ καὶ ἀλύπως), ὥστε ὑπομένειν. τὴν δὲ τοῦ πυρὸς παχυτέραν καὶ σφοδροτέραν οὔσαν «καὶ» διαθερμαίνουσιν μᾶλλον παραχρῆμα μὲν ἀνιόντος τοῦ αἵματος ποιεῖν εὐχροίαν ὕστερον δ' οὐ διαμένειν. οὐ μὴν ἀλλ' ἐάν τις τούτῳ σφοδρότερον χρήσεται καὶ κατακαύσῃ, μελαίνει. μέλανα γὰρ τὰ πυρίκαυστα καὶ ὅλως τὰ κατακαίόμενα.

[39] διὸ καὶ αἱ φλυκτίδες ἔχουσιν ἐνιαχοῦ τοιαύτην τινὰ χροίαν ὥσπερ ἀποσβεννυμένου τοῦ πυρὸς καθάπερ ἐν τοῖς ἄνθραξιν. οὐδὲν γὰρ μέλαν ἄνευ ὑγρότητος, ἀλλ' ὅταν ἐκκαυθῇ, πάντα λευκὰ καὶ τεφρώδη καθάπερ καὶ τὰ ὀστᾶ. τὸ δ' ἐπὶ τοῦ κεράμου λεγόμενον, ὅτι μελαίνει τὸ πῦρ, τὴν σάρκα μὴ μελαῖνον, ἢ οὐκ ἀληθὲς ἢ οὐχ ὅμοιον, μίξει γάρ τινι μελαίνει, τὸν ἄσβολον

καὶ τὸν καπνὸν ἀναφέρον, ὥσπερ καὶ τὰ ξύλα καὶ τὸν κέραμον καὶ τοὺς τοίχους, ἐπεὶ καὶ τοὺς ἄνθρακας τρόπον τινὰ παραπλησίως. ἐγκαταδύεται γὰρ ὁ καπνὸς ἀναφέρων πολὺ γεῶδες (ἅμα δὲ καὶ ἡ ὑγρότης οὐ πᾶσα ἐκκαίεται διὰ τὸ μὴ πυροῦσθαι. καὶ διὰ τοῦτο βαρύτεροι τῶν ἄλλων εἰσίν), ἀναφερομένης γὰρ τῆς τοιαύτης ἀναθυμιάσεως ἔλκεται τῇ πνοῇ καὶ εἰσδύεται πόρρω. διὸ καὶ βαρύνει τὰς κεφαλὰς καὶ ὅλα τὰ σώματα. τούτων μὲν οὖν ταύτας τὰς αἰτίας ὑποληπτέον.

[40] ἐὰν δὲ ὅλως ἐν ἑτερογενέσι τεθῇ τὸ θερμὸν οἷον ὑγρῷ καὶ ξηρῷ, πλείων ἔτι γίνεται διαφορά. πολλὰ γὰρ οὐ δύναται ποιεῖν ἐκάτερον, ὢν θάτερον, οὐκ ἀσθενέστερον ἔχειν δοκοῦν τὸ θερμόν. οἷον τὸ ὕδωρ ζέον θερμότερον ὄν κατὰ τὴν ἀφὴν <ἡ γ> οὐχ ἦττον τῆς φλογός, οὐ τήκει ταχύ. καὶ πάλιν τὸ πῦρ οὐ δύναται κατὰ μικρὸν ἐξάγειν τὸ ὑγρὸν οὐδὲ συνιστάναι καὶ παχύνειν, ἀλλὰ διὰ τὴν ξηρότητα πυκνοὺς τοὺς ἔξω πόρους ἀποδείκνυσιν ὥσπερ τὰ ὡά.

[41] τὸν αὐτὸν δὲ τρόπον καὶ ἐάν τι ἄλλο δέῃ μαλακῇ θερμότητι πέττειν ἢ παχύνειν· ἡ δ' ὑγρότης ὥσπερ μαλάττει μινγνυμένη. διὰ τοῦτο καὶ ὅταν περίξηρος ὁ ἀήρ ᾖ, ἐκκαίει τὰ ὀπωριαῖα. καὶ ὅπου φύσει τοιοῦτος, ἀεὶ τοῦτο συμβαίνει, πλὴν ἐὰν δὴ τὸ ἔδαφος βοηθῇ διαρρέον καὶ τὴν ἱκμάδα παρέχον ἢ δρόσοι πίπτωσιν· οὕτως ἅμα τροφήν τε λαμβάνουσι καὶ πέψιν.

[42] εἰς μὲν οὖν τὰ τοιαῦτα χρήσιμον [πλήν] ἐν ὑγρότητι καὶ μεθ' ὑγρότητος τὸ θερμόν. εἰς δὲ τὰς τήξεις τὸ ὑγρὸν ἀχρεῖον (αἴτιον δέ, ὅτι τὸ τηκτὸν ὕδατος ὄν φύσει ξηρᾶς δεῖται θερμότητος εἰς τὴν διάλυσιν. τὸ γὰρ ὅμοιον ὑπὸ τοῦ ὁμοίου ἀπαθές), ἅμα δὲ καὶ ἡ ἀσυμμετρία τῶν πόρων ἐναντιοῦται πρὸς τὸ μὴ δέξασθαι· μεγαλομερές γάρ. οὐχ οἷόν τε δὲ ἄνευ τοῦ ὑγροῦ χωρισθὲν εἰσιέναι τὸ θερμόν. ἔτι δὲ ἀσθενέστερον, <ἡ> ὥστε διοῖζαι τοὺς πόρους, πυκνῶν καὶ συνεχῶν ὄντων τῶν ἔξωθεν. διὰ δὲ τοῦθ' ἡ ξηρὰ θερμότης ἀρμόττει πρὸς τὰς τήξεις καὶ αὐτὴ λαμβάνουσά τινα συμμετρίαν. εἰ γὰρ πλείων, ἐκκαίει. τὰ δὲ καὶ ὅλως κατακαίει πρὶν εἰς διάλυσιν ἀγαγεῖν.

[43] ἔνια δὲ τοιαύτης δεῖται θερμότητος, ἡ ἐν λεπτοτέρῳ γίνεται τοῦ ὕδατος, ὥσπερ τὰ λῖνα καὶ οἱ στήμονες οἱ ἐψόμενοι. τῷ γὰρ ἀτμῷ ταῦτα διαθερμαινόμενα λαμβάνει τὴν ἔψησιν ἐγκαταμινγνυμένης ἅμα τῆς ἱκμάδος, ὃ καὶ χρήσιμον πρὸς ἰσχύν. ἔνια δὲ καὶ τῶν βρωτῶν οὕτως ἔψεται διαφεύγειν βουλομένων τὸ ὑγρὸν, ὅθεν οὐ κακῶς κεῖται τοῦνομα τὸ πνίγειν. ἐγκατακλείουσι γὰρ περιπωμάζοντες καὶ περιπλάττοντες τὸν ἀτμόν. ὥστε τρίτη τις ἀπόστασις ἀπὸ τοῦ πρώτου αὕτη καὶ γενέσις. τὸ μὲν γὰρ ὑγρὸν ἀπὸ τοῦ ξηροῦ γίνεται θερμόν, τοῦτο δ' ἀπὸ τοῦ ὑγροῦ, πλὴν ἐκεῖ μὲν μινγνυμένου

πως τοῦ πυρός, τοῦτο δ' ἴδιον ἐκκρινομένου καὶ ἀπiónτος.

[44] ἡ δὲ δὴ τοῖς ἐμψύχοις σώμασιν ἐνυπάρχουσα θερμότης, πλείοσι μίγνυμένη καὶ τρόπον ἰδιαιτέρον, οἷον εἰ ζῶσα καὶ γόνιμος ἤδη γίνεται τῶν ὁμοίων. ἔτι δὲ προτέρα ταύτης ἢ ἀπὸ τοῦ ἡλίου. καὶ γὰρ αὕτη γόνιμος καὶ ζῶων καὶ φυτῶν, οὐκ ἄμικτος μὲν οὖσα τῷ ἀέρι (μᾶλλον δ' ἐν αὐτῷ τούτῳ γινομένη), συμμετρίαν δέ τινα ἔχουσα τῇ μαλακότητι καὶ λεπτότητι πρὸς τὸ γεννᾶν, οὐχ ὥσπερ ἡ τοῦ πυρὸς σκληρὰ καὶ περικαῆς. διὸ καὶ τὰ σπέρματα πυρωθέντα μὲν ἀβλαστεῖ, θερμαινόμενα δ' ὑπὸ τοῦ ἡλίου καθ' ὑπερβολὴν <γεννᾷ καὶ βλαστάνει>. ἐνίστε γὰρ φασὶ περὶ Βαβυλῶνα καὶ ἔτι τοὺς θερμότερους τόπους καὶ πεδᾶν ἐπὶ τῆς ἄλλω καθάπερ τὰ φρυγόμενα [γεννᾷ καὶ βλαστάνει]. τὸ μὲν οὖν πῦρ καὶ τὸ θερμὸν τηλικαύτας καὶ τοιαύτας ἔχει διαφορὰς καὶ ὃν τε καθ' αὐτὸ καὶ μετ' ἄλλων καὶ ἐν ἄλλοις μίγνύμενον.

[45] ἐκ ταύτης δὲ πως τῆς αἰτίας καὶ ἐκεῖνο λύεται τὸ ἀπόρημα, διὰ τί ποτε ἡ μὲν κοιλία τήκει τὰ νομίσματα, τὸ δὲ ὕδωρ ζέον θερμότερον ὃν οὐ τήκει. καὶ γὰρ ὅλως τὸ ὑγρόν, ὥσπερ ἐλέγχθη, κωλυτικὸν τήξεως καὶ ἅμα διὰ τὴν μαλακότητα καὶ μεγαλομέρειαν οὐ δύναται τέμνειν οὐδὲ διοίγειν τοὺς πόρους. ἡ δ' ἐν τῇ κοιλίᾳ θερμότης ξηροτέρα καὶ γεωδεστέρα διακρινομένου καὶ ὑπονοστοῦντος αἰεὶ τοῦ ὑγροῦ καὶ πρὸς τὴν κύστιν.

[46] καὶ πάλιν διὰ τί τῶν μὲν ἐν τῷ πυρὶ κατακαιομένων νεκρῶν γίνεται τι λείψανον, ὃ δ' ἐν Λυκίᾳ λίθος, ἐξ οὗ τὰς σοροὺς ποιοῦσι, καὶ ὅπου ἄλλοθι τοιοῦτος, ἀφανίζει πάντα καὶ ἐν ἑαυτῷ τέφραν ποιεῖ; διαφέρει γὰρ καὶ ἐνταῦθ' ἡ θερμότης. ὅτι μὲν ὁ λίθος ἐργάζεται τῇ θερμότητι καὶ τῇ φύσει θερμὸς ὢν, σημεῖον τὸ γίνεσθαι κονίαν ἐξ αὐτοῦ, τοῦ δὲ θερμῷ ἐτέρῳ τὸ διαιρεῖν ταχύ τε καὶ εἰς λεπτά. ταχὺ μὲν γὰρ τὸ θερμότερον καὶ κινητικώτερον οἷον ἡ φλόξ, εἰς δὲ μικρὰ τὸ λεπτομερέστερον διὰ τὸ πάντῃ διαδύεσθαι.

[47] τοιοῦτον δὲ τὸ ἐν τῷ λίθῳ θερμόν, ἐπεὶ ποιεῖ γε τοῦτο καὶ ὁ ἀήρ ὁ ἐγκατακλειόμενος ἐν ταῖς θήκαις καὶ διαλύει πάντα εἰς τέφραν ἀλλὰ χρονιώτερος θερμανθεὶς. ἡ δ' ἐν τῷ λίθῳ θερμότης τῆς μὲν τοῦ πυρὸς ἀσθενεστέρα λεπτοτέρα δέ, τῆς <δὲ> τοῦ ἀέρος τοῦ συγκατακλειομένου θερμότερα λεπτή δ' ἦττον, ὥστε τοῦ μὲν θάπτον τοῦ δὲ <εἰς> λεπτότερα διαιρεῖν χρονιώτερον <δέ>.

[48] ἐπεὶ δὲ τὸ σωματωδέστερον καὶ πυκνότερον πυρωθὲν θερμότερον, διὰ τοῦθ' ὅπου παχὺς καὶ θολερώτερος ὁ ἀήρ, πάγοι καὶ καύματα μᾶλλον, ὥστ' ἔνιοι ψυχρότατοι καὶ καυματωδέστατοι. πυρωθεὶς γὰρ ὁ ἀήρ κατέχων ἐν ἑαυτῷ διὰ τὴν παχύτητα τὸ θερμὸν ἐκπυροῖ τὸν τόπον. ὥς ἐπὶ τὸ πολὺ δ' οἱ

τοιοῦτοι κᾶπνοι. ἐὰν δὲ καὶ ἐπιπίπτῃ πνεῦμα θερμὸν ὄντα τὸν ἀέρα προσφέρων, καίεται.

[49] διὰ τὴν αὐτὴν δ' αἰτίαν καὶ τῶν ἐψομένων τὰ παχύτερα θερμότερα καθάπερ τὸ γάλα καὶ ὅλως τὰ ροφήματα τοῦ ὕδατος. καὶ ἐὰν ἐπιβάληται τι ἐπὶ τὸ ὕδωρ, θερμαίνεται θάττον ἢ ψιλόν (οἶον γὰρ ἀντιφράττει καὶ κωλύει διατμίζειν ἔξω τὸ θερμόν) ὥσπερ τὰ ἐπιποματιζόμενα, καὶ ἅμα δὴ θερμανθέντα θερμαίνει. πᾶν γὰρ ἔχον πυκνότητα δύναται ποιεῖν τοῦτο διὰ τὸ κατέχειν. ὅλως γὰρ, ὃ πολλάκις λέγεται, τὸ μὲν λεπτόν καὶ ῥέον αὐτὸ καὶ μὴ μένον ἔτι δὲ μικρομερὲς ὃν οὐχ ὁμοίως καίει. τὸ δ' ἐναντίως ἔχον τούτῳ διὰ τὸν ἀθροισμὸν καίει μᾶλλον καὶ ἰσχυρότερον γίνεται καὶ χρονιώτερον.

[50] τῆς δὲ φλογὸς λευκότετον αἰεὶ καὶ καθαρώτατον τὸ μέσον, τὸ δὲ κάτω καὶ τὸ ἔσχατον ἐρυθρὰ καὶ μελανοῦντα μᾶλλον. ἐμφαίνεται δὲ τοῦτο μάλιστα ἐπὶ τῶν λύχνων, ὅτι ἀμιγέστατον τοῦτο τῇ ἀναθυμιάσει τὸ μὲν γὰρ πρὸς αὐτῇ τῇ μύξῃ καὶ τοῖς λύχνοις, ἅτε ἐπὶ τοῦτο φερομένης τῆς ἀναθυμιάσεως, εὐλόγως μελαίνει μᾶλλον. εἰς δὲ τὸ ἄκρον οἶον συρροὴ γίνεται καταλήγοντος ἤδη <τοῦ πυρός> καὶ ἅμα προσεπιλαμβάνοντος τοῦ ἀέρος (ἄνω γὰρ ἡ ἰσχὺς πᾶσα καὶ ἡ φορὰ τῆς φλογός· διὸ καὶ ὁ καπνὸς ταύτῃ μάλιστα φέρεται).

[51] τάχα δὲ κᾶκεῖνο οὐ κακῶς, εἰ μὴ ἄρα καὶ ἀληθέστερον, ὥς οὔτε, ἢ γίνεται, οὐπω ἔστιν, οὔτε, ἢ φθείρεται, ὅμοιον ἔτι. κάτωθεν μὲν <γὰρ> γίνεται, ἄνωθεν δὲ φθείρεται ὑπὸ τοῦ ἀέρος. τὸ δὲ μέσον οἶον καθαρὸν καὶ εἰλικρινές. διὸ καὶ ταύτῃ μὲν [οὐ] διοράται, τὰ δ' ἄνω κωλύει διὰ τε τὸ εἰς ὀξὺ συννεύειν καὶ διὰ τὴν κίνησιν.

[52] ἀπορεῖται δὲ τοῦτο, διὰ τί τὸ τῆς φλογὸς σχῆμα πυραμοειδὲς ἔστι; καὶ φησι Δημόκριτος μὲν περιψυχομένων αὐτῆς τῶν ἄκρων εἰς μικρὸν συνάγεσθαι καὶ τέλος ἀποξύνεσθαι. ἕτεροι δὲ τινες τῶν παλαιῶν ὑπὸ τῆς τοῦ προσπίπτοντος πνεύματος κινήσεως περισχίζεσθαι. τό τε γὰρ ἐπάνω τῆς φλογὸς ἀσθενέστερον εἶναι καὶ ἐν πλείστη κινήσει, ἀλλ' οὐ περιψύχεσθαι. [καὶ διὰ τὴν τοῦ προσπίπτοντος κίνησιν] εἰ γὰρ τὸ περιψύχειν εἰς τὰ ἄνω <καὶ περὶ τὰ κάτω> δεῖν ὡσαύτως γίνεσθαι, ὃ δὴ οὐδ' ἐτέρου τῶν δύο. <διὸ> καὶ μᾶλλον ὑπὸ τῆς κινήσεως ἢ περιψύξεως ἀποξύνεσθαι.

[53] γελοία δὲ ὅλως καὶ τούτοις ἡ τοῦ προσπίπτοντος ἀέρος κίνησις. ὅφ' αὐτοῦ γὰρ κινεῖται τὸ πῦρ καὶ μᾶλλον κινεῖ τὸν ἀέρα ἢ ὑπ' ἐκείνου τῷ διωθεῖν, ἐπεὶ καὶ εὐδίας οὔσης οὐδὲν ἦττον ἢ ὀξύτης τῆς φλογός. ἔτι δ' ἄτοπος ὁ περισυρμὸς ὥσπερ κούφων τινῶν καὶ ἐπιπολαίων ἐπόντων. χρῆν γὰρ τοῦτο πανταχόθεν ὁμοίως συμβαίνειν, καὶ πνεύματος ὄντος μείζονος μᾶλλον.

νῦν δ' ἐν ταῖς ἀπνοίαις ἀποκορυφούται μάλιστα ἡ φλόξ ἅτε καὶ οὐ κωλυομένη τῷ πνεύματι, ὅπερ διακωλύει τὴν ἐπ' ὀρθὸν φορὰν ἀλλὰ περικλᾷ καὶ μεταρρίπτει. τοῦτο μὲν οὖν πρὸς τῷ μὴ ἀληθές οὐδ' ἄγαν συνετόν.

[54] εἰ δ' ἐν φορᾷ τινι καὶ ρύσει τὸ πῦρ, ἀεὶ δὲ τῶν ρεόντων εἰς ἔλαττον ἡ ἀποτελεύτησις μὴ γινομένης ἄλλοθεν ἐπιρροῆς. (ἀναγκαῖον εἰς τὸν πλείω τόπον διατεινόμενον καὶ τὸ συνεχές διατηροῦν ἀποστενοῦσθαι μᾶλλον.) ὥστε τοῦτο ἂν εἴη καὶ τῆς φλογὸς αἴτιον εἰς τὸν σχηματισμόν. ἡ γὰρ ἀρχὴ κάτωθεν ἰσχυροτάτη καὶ πλείστη, μετὰ δὲ ταῦτα ἐλάττων ἀεὶ καὶ ἀπολήγουσα ἀσθενεστέρα, διασώζουσα δὲ τὸ συνεχές.

[55] ὅπερ καὶ ἐπὶ τῶν ὑδάτων γίνεται. καὶ <μᾶλλον> γίνοιτ' ἂν, εἰ μὴ παρεμπύπτειν ἔξωθεν ἕτερα ρεῖθρα. πολλῆς γὰρ οὔσης καὶ ἀθρόας τῆς πηγῆς, τὸ ἐγγύτατον πλεῖστον, εἴτα ἔλαττον ἀεὶ καὶ ἔλαττον. τελευτῶν δ' ὑπελλεῖπει, ἐὰν μὴ που τόπος ἔγκοιλος ὦν ἢ καὶ ἄλλως ἀνωμαλῆς, ἀθροισμὸν ἢ διάχυσιν εἰς πλείω ποιήσῃ. τοῦτο δ' ἐπὶ τοῦ ἀέρος καὶ τῆς φλογὸς οὐκ ἔστιν. ὁ μὲν γὰρ ὁμαλῆς. ἡ δὲ φλόξ καθ' αὐτὴν φέρεται ἀλλ' οὐ διὰ τὴν τῶν τόπων ἔγκλισιν.

[56] ὅμοιον δὲ καὶ οὐχ ἦττον ἴσως οἰκεῖον τὸ ἐπὶ τῶν φυτῶν. καὶ γὰρ τούτων ἡ αὐξησις εἰς λεπτὸν ἀνέκει καὶ εἰς ὀξύ, τῇ τοῦ θερμοῦ φορᾷ γινομένη, μέχρις ὅταν ἀρχὰς ἐτέρας ἐν αὐτοῖς λαβόντα ποιήσῃται τὴν τῶν ὀζων καὶ κλάδων ἔκφυσιν. εἰ δ' ἄρα καὶ τὸ περιέχον κωλύει τι καὶ ἀφαιρεῖται, καθάπερ εἰκός, οὐχ ἢ κινούμενον ἀλλ' ἢ ψυχρόν, τοῦτο δρᾷ. πλέον δ' ἀφαιρεῖται καὶ μᾶλλον ἐνισχύει δηλὸν ὅτι τοῦ ἀσθενεστέρου καὶ πορρωτέρω διατεινομένου. καὶ περὶ μὲν τοῦ σχήματος ἱκανῶς εἴρηται.

[57] διαφοραὶ δὲ γίνονται πλείους τοῦ πυρός. πειρατέον δ' εἰς ἐκάστην τούτων ἀνάγειν κατὰ μέρος οἷον καὶ τὰ τοιαῦτα· διὰ τί <τὰ> τὴν σάρκα καίοντα τὴν κοιλίαν οὐ καίει οὐδὲ τὰ στόματα ὁμοίως; διὰ τί δὲ τοὺς λύχνους τινὲς εἰς τὰ στόματα λαμβάνοντες ἀποσβεννύοντες οὐ καίονται; διὰ τί δὲ τοὺς διαπύρους ὀβελίσκους σφοδρτέρως πιάζοντες, ἦττον <ἢ> οὐ καίονται (διὸ καὶ τοὺς διὰ σποδοῦ βαδίζοντας πρὸς τοῖς ἄλλοις, οἷς παρασκευάζονται, καὶ τοῦτό φασι δρᾶν); καὶ διὰ τί τὰ κατακαύματα τῷ θερμῷ καθίσταται καὶ κωλύεται φλυκταίνας ἐπαίρεσθαι;

[58] πάντα γὰρ ταῦτα καὶ εἴ τι τούτοις ὅμοιον εἰς ἐκείνας πίπτει τὰς αἰτίας εἷς τε τὸ τὸ ἔλαττον ὑπὸ τοῦ πλείονος φθείρεσθαι καὶ μαραίνεισθαι καὶ εἰς τὸ συνθλίβειν τε καὶ καταπνίγειν τὴν ἀρχήν. τοῦτο γὰρ ποιεῖ καὶ τὰ στόματα καὶ ἡ κοιλία καὶ ἡ πίεσις. οὐκ ἔῃ γὰρ ἀπορρεῖν (μὴ ἀπορρέον δὲ ἦττον καίει, ἦττων γὰρ ἢ δύναμις), ἐπεὶ καὶ θλίβοντες οὕτω (καὶ μεταβάλλοντες τοὺς

ἀνθρακας) τῇ ἀποπιέσει σβεννύουσιν.

[59] αἱ δὲ τῶν ὑγρῶν δυνάμεις [αἱ] σβεστικώτεροι τῷ παρεισδύεσθαι μάλιστα εἰς τὴν ἀρχήν, ὥσπερ ἐλέχθη περὶ τοῦ ὄξους. ἐὰν δ' ἅμα καὶ γλίσχρον τι μιχθῇ, μᾶλλον δ' ἔτι· τὸ μὲν γὰρ διαδῦναι δύναται· ἂν καὶ διοδοποιεῖν, τὸ δ' ὥσπερ ἐπαλείφει καὶ ἐπιπωματίζει. διὰ τε τοῦτο σβεστικώτατον εἶναι φασιν, ἐὰν τις μίξη τὸ ὄξος ὡς τῷ λευκῷ (τὸ μὲν γὰρ γλίσχρον, τὸ δὲ διαδυτικόν), καὶ πρὸς τὰς ἐμπρήσεις τῶν μηχανημάτων τοῦτο μάλιστα βοηθεῖν.

[60] ἐὰν δ' ἅμα τῇ ὑγρότητι τῇ τοιαύτῃ καὶ τὸ ψυχρὸν προσῇ φύσει, καὶ τοῦτο συνεργεῖν εἰς τὴν σβέσιν, ὅπερ καὶ περὶ τὴν σαλαμάνδραν εἶναι (ψυχρὸν γὰρ τῇ φύσει τὸ ζῶον, καὶ ἡ ἀπορρέουσα ὑγρότης γλίσχρα καὶ ἅμα χυλὸν τιν' ἔχουσα τοιοῦτον, ὥστε διικνεῖσθαι πορρωτέρω. σημεῖον δὲ καὶ <τὸ> τὰ ὕδατα ὀλέθρια γίνεσθαι καὶ τοὺς καρπούς, ἐὰν καταμιχθῇ, καὶ μᾶλλον τεθνεώσης).

[61] ἔτι δὲ καὶ τὸ νωθὲς τῆς πορείας συνεργεῖ, πλείω γὰρ χρόνον ἐπιμένον μᾶλλον σβέννυσιν. ἢ δὲ σβέσις οὐκ ἐὰν ὀπόσον οὖν ἢ πῦρ, ἀλλ' ἐὰν σύμμετρον πρὸς τὴν φύσιν καὶ τὴν δύναμιν. καὶ ἐνίοτε, ἐὰν μὴ ἐπιχρονίση, πάλιν ἀναζωπυρεῖται. σύμφωνον δὲ τούτῳ καὶ τὸ τὰ ἰζούμενα μὴ καίεσθαι, διὸ καὶ ἔνια πρὸς τὸ μὴ πάσχειν ἀλείφουσι, ψυχρὸν γὰρ δὴ καὶ γλίσχρον ὁ ἰζός, ὥστε [μὴ] διὰ τὴν πυκνότητα μὴ δέχεσθαι καὶ διὰ τὸ ψυχρὸν σβεννύειν. τούτων μὲν οὖν αὐταὶ αἱ αἰτίαι.

[62] τοῦ δὲ μὴ ἐπαίρεσθαι τὰ κατακαύματα, καὶ εἴ τι τοιοῦτον ἕτερον, ἢ πλείων θερμότης κρατοῦσα τῆς ἐλάττονος καὶ ἀναξηραίνουσα τὴν γινομένην σύντηξιν, ἀφ' ἧς αἱ φλύκταιναι, ὥσπερ ἐλέχθη, καὶ καταμαραίνουσα καὶ συμφρύγουσα τὴν ἀρχήν. καὶ τὰς μὲν καθ' ἕκαστα σβέσεις ἐκ τούτων θεωρητέον.

[63] “διὰ τί δ' ἐκ μὲν ξύλων γίνεται πυρεῖα καίπερ οὐκ ἐκπηδῶντος πυρός, ἐκ δὲ λίθων ἐκπηδῶντος ἦττον γίνεται;” τοῦτο δ' οὐκ ἔστιν ἀληθές. ἐκ πολλῶν γὰρ γίνεται μᾶλλον καὶ θάττον. οὐ μὴν ἀλλ' εἴπερ, ἐκείνην ὑποληπτέον τὴν αἰτίαν, ὅτι τὸ μὲν ξύλον εὐθὺς ὑπεκκαῖον ἔχει συγγενῶν ἐνόνητων τῷ πυρί (κ' ἂν εἰ γὰρ προσάγεται, οὐδὲν θάττον πυροῦται δι' ἀσθένειαν), ὁ δὲ λίθος οὐκ ἔχει κατάξηρος ὢν, διὸ καὶ τὸ ἐκπηδῶν εὐθὺς πεπυρωμένον, προσάγουσιν.

[64] ἅπτεται <δὲ> βέλτιον [δ'] ἐν βορείοις ἢ νοτίοις τὰ πυρεῖα, διότι ξηρότερα ὄντα θάττον καὶ δι' ἐλάττονος τρίψεως ἐκθερμαίνεται. διὰ τοῦτο γὰρ οὐδ' ἐκ τῶν τυχόντων ξύλων ἀλλ' ἐξ ὠρισμένων τινῶν γίνεται. δεῖ γὰρ

ἔχειν τινὰ συμμετρίαν. ἄριστα δ' οἱ μὲν ἐκ κιττοῦ φασιν, οἱ δ' ἐκ τῆς καλουμένης ἀθραγένης τὴν ἐσχάραν, τὸ δὲ τρύπανον δάφνης. οὐ γὰρ ἐκ τοῦ αὐτοῦ ποιοῦν καὶ πάσχον ἀλλ' ἕτερον εὐθὺ κατὰ φύσιν. ἀγαθὰ δὲ καὶ ἐκ ῥάμνου, καὶ μᾶλλον εἰς τὴν ἐσχάραν. πρὸς γὰρ τῷ ξηρὰν καὶ ἄχυμον εἶναι καὶ μανότητά τινα ἔχειν, δεῖ δὲ τοῦθ' ὑπάρχειν, ἴν' ἡ τρίψις ἰσχύη, τὸ δὲ τρύπανον ἀπαθέστερον εἶναι. διὸ <τὸ> τῆς δάφνης ἄριστον, ἅμα γὰρ ἀπαθὲς ὃν ἐργάζεται τῇ δριμύτητι.

[65] ἐπεὶ δὲ ἄνευ ὑγρότητος ἡ ἀναθυμιάσεώς τινος οὐκ ἔστι θερμότης, διὰ τοῦθ' ἡ κονία καίει μᾶλλον ἢ καὶ ἀπλῶς ὕδατος ἐπιχειομένου (δεῖται γὰρ ὕλης τὸ ἐγκαταλειμμένον πῦρ ὥσπερ οἱ λύχνοι), καὶ οὐθ' ἡ παλαιὰ σφόδρα οὐθ' ἡ λεία ἀλλ' ἡ ἀρτίκυστος καὶ βωλοειδής. τῆς μὲν γὰρ ὁ χρόνος ἐξήρηται διὰ τὴν ἀναπνοήν, ἡ δὲ μικρομερὴς ἄγαν ὀλίγον ἔχει. μικρὸν δὲ ὃν τὸ πῦρ ἀσθενές.

[66] ἔοικε δὲ καὶ τὸ περὶ τὴν γύψον τὴν Φοινικικὴν τοιοῦτον εἶναι. φασὶ γὰρ κἀκείνην ἀναφυρομένην καίειν. οὐδὲν γὰρ διαφέρειν σύμφυτον καὶ ἐπακτὸν ἐξῶθεν ἔχειν τὸ θερμόν. ἐμφαίνει δὲ πῶς καὶ τὸ νίτρον τὸ κεκαυμένον ἐν τῷ ὀρύττεσθαι τὴν τοιαύτην δύναμιν. ὅταν γὰρ ὕδωρ μικρὸν ἐπιχυθῇ, διαθερμαίνει καὶ αἰσθῆσιν ἐμποιεῖ κατὰ τὴν ἀφήν. αἰεὶ δὲ δεῖ συμμετρίας τινὸς εἰς ἅπαντα τὰ τοιαῦτα πρὸς τὸ κρατεῖσθαι.

[67] διὰ τοῦτο γὰρ καὶ ὁ οἶνος ὁ χεόμενος ἐπὶ τὴν φλόγα καθάπερ τοῖς σπένδουσιν ἐκλάμπει καὶ ἡ θάλαττα, ὅταν ἀποσβεννύωσιν ἐὰν δ' ἔλαττον ᾖ, καὶ τὸ ὕδωρ (συστελλόμενον γὰρ καὶ ἀθροισθὲν ἰσχυρότερον). ἐν δὲ τῇ πίττῃ καιομένη μᾶλλον, ὅτι σφοδροτέρα καὶ πλείων ἡ φλόξ, ὥστε καὶ ἐκπηδᾷ καὶ κατακαίειν τὰς οἰκίας. διακρίνεται γὰρ τὸ ἐμπίπτον κρατηθὲν καὶ ἐκ φλογοῦται.

[68] ψόφος δὲ γίνεται πυρουμένου διὰ τὸ μάχεσθαι τὸ θερμόν καὶ τὸ ὑγρόν, ὅπερ συμβαίνει <καὶ> κατὰ τὴν σβέσιν. ἀῆρ γάρ τις ὁ ψοφῶν κατὰ τὴν ἐναπόληψιν καὶ ἐνταῦθα καὶ ἐκεῖ. ταῦτα δὲ καὶ ἐπὶ τῶν λύχνων ἔστιν ὁρᾶν, ὅταν ὕδωρ ἔχη τὸ ἔλαιον. τὸ γὰρ ὕδωρ σβέννυσσι. καὶ τὰ φύλλα δὲ τὰ τῆς δάφνης καὶ τοῦ κιττοῦ καὶ τὰ ἄλλα τὰ τοιαῦτα πηδᾷ διὰ πυκνότητα καὶ διὰ τὸ ἔχειν πολὺ τὸ ὑγρόν. ἐξαεροῦται γὰρ πολὺ καὶ οὐ δίδεισι τῇ πυκνότητι. διὸ καὶ ὁ ψόφος.

[69] ὡσαύτως δὲ καὶ τὰ ξύλα καιόμενα τὰ μὲν ῥήγνυνται καὶ πηδᾷ, τὰ δὲ συνεχῇ ποιεῖ τινα ψόφον (καλοῦσι δ' οἱ μὲν γελᾶν τὸν Ἥφαιστον, οἱ δ' ἀπειλεῖν). αἰεὶ γὰρ καὶ ἐνταῦθα διαερούμενου τοῦ ὑγροῦ καὶ ἀθρόου

φερομένου μετά βίας, ὅτε μὲν ῥῆξις γίνεται καὶ πήδησις, ὅτε δὲ συνεχῆς ψόφος καὶ φλόγωσις. ὁ καὶ αὐτὸ ποιεῖ τρόπον τινὰ τὸ πῦρ ὥσπερ ἐν φρέατι πνεύματος ὄντος πυρουμένου.

[70] ὁ δὲ καπνὸς ἦττον λυπεῖ, ὅταν ἐν τῷ αὐτῷ πῦρ ἦ, διὸ καὶ οἱ ἐν τοῖς σπηλαίοις πολιορκούμενοι τῷ καπνῷ, πῦρ ἐὰν ἔχωσιν, οὐδὲν πάσχουσι. σβέννυσι γὰρ τὸ ἐν τῷ καπνῷ θερμὸν τὸ πῦρ, ἐπεὶ ἐφέυκε τὸ πλεόν τὸ ἔλαττον μαραίνειν, σβεννυμένου δὲ φθείρεται καὶ ὁ καπνός. διὸ καὶ ὁ ἥλιος ὥσπερ τὸ πῦρ βοηθεῖ πρὸς τὸ μὴ καπνίζεσθαι. τὸν δ' ἐν ἐφικτῷ καὶ προσπίπτοντα ἐκπυροῖ. διὰ τοῦτο καὶ οἱ ἐγγὺς τοῦ πυρὸς ἦττον ἐνοχλοῦνται. καὶ γὰρ τοῦτο ποιεῖ καὶ ἀναφέρει καὶ ἀνωθεὶ πρὸς τὰ ἄνω.

[71] διὰ τὸ αὐτὸ δὲ καὶ τὸ πολὺ πῦρ ἄκαπνον, ὅτι φλοολογοῦται καὶ κατισχύεται πολλοῦ πυρὸς ὄντος. ὅταν γὰρ ἦ πλεόν τὸ καιόμενον, ἔλαττον τὸ καπνίζον ἐξαφθέντος ἢ θυμιωμένου. καὶ ἐπὶ τῶν ξηρῶν ξύλων πυκνῶν συντιθεμένων ἄνωθεν οἱ ἄνθρακες ἐπιβαλλόμενοι ποιοῦσιν ἀκαπνότερον, ὅτι ἐκφλογοῦται πᾶς ὁ καπνὸς ἐμπίπτων εὐθὺς εἰς τὸ πῦρ καὶ τῇ πυκνότητι κατακλειόμενος.

[72] δύσκαπνα δὲ τῶν ξύλων τὰ τε χλωρὰ καὶ τὰ σκολιὰ καὶ τὰ ἰνώδη καθάπερ ὁ φοῖνιξ. ἄινον γὰρ δεῖ καὶ εὐδιαίρετον εἶναι τῇ φλογί. διὸ καὶ τὰ ἐσχισμένα τῶν ἀσχίστων εὐκαυστότερα, κωλύει γὰρ ὁ φλοιός. καὶ ἐὰν τις κινῇ καὶ μετατιθῇ καιόμενα, καπνωδέστερα, ὅτι συμβαίνει τὰ μὲν μεταστραφέντα σβεννύεσθαι τὰ δὲ μὴ καίεσθαι προσπίπτοντος ἄρτι τοῦ πυρὸς ἀλλ' ὅλα καπνίζειν. ἔνια δὲ καὶ τῶν εὐκαύστων περιφλοισθέντα πολὺ καυστότερα γίνεται καθάπερ τὰ ἐλάινα. διὸ καὶ οὐ πολὺν χρόνον φασὶ δεῖν φυσᾶν, ἐὰν μὴ πληθὸς ἦ ξύλων. ἢ δὲ δριμύτης τοῦ καπνοῦ κατὰ τὴν ὑγρότητα τὴν ἐκάστου. διὸ καὶ ὁ ἀπὸ τῶν συκίνων δριμύς· ὁπωδέστατον γάρ. ὁ δὲ τῆς δαδὸς καὶ πεύκης οὐ δηκτικός, ὅτι πίων καὶ ἐλαιώδης [ὥσπερ ὁ καπνός], οὐκ ἔχων οὐδὲν τραχὺ καὶ γεῶδες.

[73] ὅτι δ' ἀπὸ μὲν τοῦ ἡλίον φῶς ἄπτουσι τῇ ἀνακλάσει ἀπὸ τῶν λείων, [τί τὸ ἄπορον; συμμιγνύουσι δὲ τὸ ὑπέκκαυμα] ἀπὸ δὲ τοῦ πυρὸς οὐχ ἄπτουσιν, αἴτιον δ' ἢ τε λεπτομέρεια, καὶ ὅτι συνεχῆς γίνεται μᾶλλον ἀνακλῶμενον, τὸ δὲ ἀδυνατεῖ διὰ τὴν ἀνομοιότητα. ὥστε τὸ μὲν τῷ ἀθροισμῷ καὶ τῇ λεπτότητι διαδυόμενον εἰς τὸ ἔκκαυμα δύναται καίειν, τὸ δ' οὐδ' ἕτερον ἔχον οὐ δύναται. ἐξάπτεται δὲ ἀπὸ τε τῆς ὑέλου καὶ ἀπὸ τοῦ χαλκοῦ καὶ τοῦ ἀργύρου τρόπον τινὰ ἐργασθέντων, οὐχ, ὥσπερ Γοργίας φησὶ καὶ ἄλλοι δὲ τινες οἴονται, διὰ τὸ ἀπιέναι τὸ πῦρ διὰ τῶν πόρων.

[74] οἱ δ' ἐρριγώκοτες κατὰ μικρὸν διαθερμαίνονται καὶ οἱ λουόμενοι χλιαρῷ καταχέονται πρῶτον, ὅπως εἰσδυόμενον διαχέῃ. τὸ γὰρ ἄγαν θερμὸν ἀθρόως συνέκλεισε τοὺς πόρους καὶ ὅτε μὲν ἀντιπεριστὰν καὶ συνθλίψαν φρίκην ἐποίησεν, ὅτε <δ'> ἐκώλυσεν ἐξελθεῖν, ὥστε μὴ πεπαῦσθαι τὸ ῥιγοῦν ἀλλὰ τὰ μὲν περικεκαῦσθαι, τὰ δὲ κατεψῦχθαι καθάπερ καὶ ἐπὶ τῶν κακῶς ὀπτωμένων. καὶ γὰρ ἐνταῦθα τὸ μὲν ἔξω καίεται, τὰ δ' ἐντὸς ὠμά, πυκνουμένων καὶ οὐ διεόντων τῶν πόρων. διὸ καὶ μαλακότητα καὶ συμμετρίαν τινὰ ζητοῦσι πρὸς τὴν ὀπτησιν, καὶ ἐργωδέστερόν φασι τὸ καλῶς ὀπτῆσαι καὶ μᾶλλον τέχνης ἢ τὸ ἐψηῆσαι.

[75] οἱ δ' ἄνθρακες γίνονται μὲν μέλανες, ὅτι ἐγκατακέκλεισται ὁ καπνὸς ἐν αὐτοῖς, <καὶ> μέλας ὢν φύσει καθάπερ βάπτει. διὸ μελάντατοι οἱ σκευαστοί. καίουσι γὰρ οὕτως, ὥστε ἀποσβέννυσθαι, θνυμιῶτες καὶ κατὰ μικρὸν διδόντες ἀναπνοήν. ἐὰν γὰρ ἐκφλογωθῇ, κατακαίει καὶ διαλλάττει εἰς τέφραν. ὁ δὲ καπνὸς [ὁ] μέλας, ὅτι συγκεῖται ἐξ ὑγροῦ διαλυομένου εἰς πνεῦμα καὶ γεώδους, καὶ <τού>του [πνεύματος] ὄντος μέλανος. (ὁ γὰρ ἄηρ <οὐ> φύσει μέλας). ἕως μὲν οὖν ἂν ἔχωσιν πῦρ, ἐρυθροὶ φαίνονται. διὰ γὰρ τοῦ μέλανος τὸ λευκὸν φαίνεται φοινικοῦν ὥσπερ ὁ ἥλιος διὰ καπνοῦ καὶ ἀχλύος. διὸ καὶ ὁ ἄνθραξ τῆς φλογὸς ἐρυθρότερος. λεπτότερος γὰρ ὁ ἀποκρινόμενος καπνὸς τοῦ ἐνυπάρχοντος ἔτι γεώδους τῷ ξύλῳ.

[76] διὸ καὶ ἥττον οὗτος εὐδίοπτος, ἐπεὶ καὶ αὐτῆς τῆς φλογὸς ἢ μᾶλλον καπνώδης καὶ τῶν χλωρῶν ἐρυθρὰ ξύλων. ὅταν δ' ἀποσβεσθῶσι πνίξει συγκατακλειομένου καὶ ἐναποσβεσμένου τοῦ καπνοῦ μέλανες γίνονται διὰ τὴν λεχθεῖσαν αἰτίαν. τὰ δ' ἐκκρίματα μάλιστα διαδύνει, ὅτι ἐναπολαμβάνεται τὸ πνεῦμα τοῦ πυρός· πνευματῶδες γὰρ μάλιστα τὸ πῦρ. ἀλλὰ περὶ μὲν τούτων ἱκανῶς εἴρηται μέχρι γε τοῦ νῦν, ἀκριβέστερον δὲ πάλιν ἐν ἄλλοις ἐροῦμεν περὶ αὐτῶν.

Metaphysica

ΘΕΟΦΡΑΣΤΟΥ ΤΩΝ ΜΕΤΑ ΤΑ ΦΥΣΙΚΑ

Πῶς ἀφορίσαι δεῖ καὶ ποίοις τὴν ὑπὲρ τῶν πρώτων θεωρίαν; ἡ γὰρ δὴ τῆς φύσεως πολυχουστέρα, καὶ ὥς γε δὴ τινές φασιν, ἀτακτοτέρα, μεταβολὰς ἔχουσα παντοίας· ἡ δὲ τῶν πρώτων ὠρισμένη καὶ ἀεὶ κατὰ ταυτά· διὸ δὴ καὶ ἐν νοητοῖς, οὐκ αἰσθητοῖς, αὐτὴν τιθέασιν ὡς ἀκινήτοις καὶ ἀμεταβλήτοις, καὶ τὸ ὅλον δὲ σεμνοτέραν καὶ μείζω νομίζουσιν αὐτήν. Ἀρχὴ δέ, πότερα συναφῆ τις καὶ οἷον κοινωνία πρὸς ἄλληλα τοῖς τε νοητοῖς καὶ τοῖς τῆς φύσεως, ἢ οὐδεμία· ἀλλ' ὥσπερ ἐκάτερα κεχωρισμένα συνεργοῦντα δέ πως εἰς τὴν πᾶσαν οὐσίαν. εὐλογώτερον δ' οὖν εἶναι τινα συναφὴν καὶ μὴ ἐπεισοδιῶδες τὸ πᾶν, ἀλλ' οἷον τὰ μὲν πρότερα τὰ δ' ὕστερα, καὶ ἀρχὰς τὰ δ' ὑπὸ τὰς ἀρχάς, ὥσπερ καὶ τὰ αἰδία τῶν φθαρτῶν. εἰ δ' οὖν οὕτω, τίς ἡ φύσις αὐτῶν καὶ ἐν ποίοις; εἰ μὲν γὰρ ἐν τοῖς μαθηματικοῖς μόνον τὰ νοητά, καθὰ πέρ τινές φασιν, οὐτ' ἄγαν εὐσημος ἡ συναφὴ τοῖς αἰσθητοῖς, οὐθ' ὅλως ἀξιώχρεα φαίνεται παντός· οἷον γὰρ μεμηχανημένα δοκεῖ δι' ἡμῶν εἶναι σχήματά τε καὶ μορφὰς καὶ λόγους περιτιθέντων, αὐτὰ δὲ δι' αὐτῶν οὐδεμίαν ^[4b] ἔχειν φύσιν· εἰ δὲ μὴ, οὐχ οὕτως γε συνάπτειν τοῖς τῆς φύσεως ὥστ' ἐμποιῆσαι καθὰ περ ζῶν καὶ κίνησιν αὐτοῖς· οὐδὲ γὰρ αὐτὸς ὁ ἀριθμός, ὃν περ δὴ πρῶτον καὶ κυριώτατον τινες τιθέασιν. εἰ δ' ἑτέρα τις οὐσία προτέρα καὶ κρείττων ἐστίν, ταύτην πειρατέον λέγειν, πότερον μία τις κατ' ἀριθμὸν ἢ κατ' εἶδος ἢ κατὰ γένος. εὐλογώτερον δ' οὖν ἀρχῆς φύσιν ἐχούσας ἐν ὀλίγοις εἶναι καὶ περιττοῖς, εἰ μὴ ἄρα καὶ πρώτοις καὶ ἐν τῷ πρώτῳ. τίς δ' οὖν αὕτη καὶ τίνες, εἰ πλείους, πειρατέον ἐμφαίνειν ἀμῶς γέ πως εἴτε κατ' ἀναλογίαν εἴτε κατ' ἄλλην ὁμοίωσιν. ἀνάγκη δ' ἴσως δυνάμει τινὶ καὶ ὑπεροχῇ τῶν ἄλλων λαμβάνειν, ὥσπερ ἂν εἰ τὸν θεόν· θεία γὰρ ἡ πάντων ἀρχή, δι' ἧς ἅπαντα καὶ ἔστιν καὶ διαμένει. τάχα μὲν οὖν ῥάδιον τὸ οὕτως ἀποδοῦναι, χαλεπὸν δὲ σαφεστέρως ἢ πειστικωτέρως. Τοιαύτης δ' οὐσης τῆς ἀρχῆς, ἐπεὶ περ συνάπτει τοῖς αἰσθητοῖς, ἡ δὲ φύσις ὡς ἀπλῶς εἰπεῖν ἐν κινήσει καὶ τοῦτ' αὐτῆς τὸ ἴδιον, δῆλον ὡς αἰτίαν θετέον ταύτην τῆς κινήσεως· ἐπεὶ δ' ἀκίνητος καθ' αὐτήν, φανερόν ὡς οὐκ ἂν εἴη τῷ κινεῖσθαι τοῖς τῆς φύσεως ^[5a] αἰτία, ἀλλὰ λοιπὸν ἄλλη τινὶ δυνάμει κρείττονι καὶ προτέρᾳ· τοιαύτη δ' ἡ τοῦ ὀρεκτοῦ φύσις, ἀφ' ἧς ἡ κυκλικὴ ἢ συνεχὴς καὶ ἄπαστος. ὥστε κατ' ἐκεῖνο λύοιτο ἂν τὸ μὴ εἶναι κινήσεως ἀρχὴν ἢ εἰ κινούμενον κινήσει. Μέχρι μὲν δὴ τούτων οἷον ἄρτιος ὁ

λόγος, ἀρχὴν τε ποιῶν μίαν πάντων καὶ τὴν ἐνέργειαν καὶ τὴν οὐσίαν ἀποδιδούς, ἔτι δὲ μὴ διαιρετὸν μηδὲ ποσὸν τι λέγων ἀλλ' ἀπλῶς ἐξαίρων εἰς κρεῖττω τινὰ μερίδα καὶ θειοτέραν· οὕτω γὰρ μᾶλλον ἀποδοτέον ἢ τὸ διαιρετὸν καὶ μεριστὸν ἀφαιρετέον. ἅμα γὰρ ἐν ὑψηλοτέρῳ τε καὶ ἀληθινωτέρῳ λόγῳ τοῖς λέγουσιν ἢ ἀπόφασιν.

Τὸ δὲ μετὰ ταῦτ' ἤδη λόγου δεῖται πλείονος περὶ τῆς ἐφέσεως, ποία καὶ τίνων, ἐπειδὴ πλείω τὰ κυκλικά καὶ αἱ φοραὶ τρόπον τινὰ ὑπεναντίαι, καὶ τὸ ἀνήνυτον καὶ οὐ χάριν ἀφανές. εἴτε γὰρ ἐν τὸ κινοῦν, ἄτοπον τὸ μὴ πάντα τὴν αὐτήν· εἴτε καθ' ἕκαστον ἕτερον αἶ τ' ἀρχαὶ πλείους, ὥστε τὸ σύμφωνον αὐτῶν εἰς ὄρεξιν ἰόντων τὴν ἀρίστην οὐθαμῶς φανερόν. τὸ δὲ κατὰ τὸ πλῆθος τῶν σφαιρῶν τῆς αἰτίας μείζονα ζητεῖ λόγον· οὐ γὰρ ἀρκεῖ ὁ γε τῶν ἀστρολόγων. ἄπορον δὲ καὶ πῶς ποτε φυσικὴν ὄρεξιν ἐχόντων οὐ τὴν ἡρεμίαν διώκουσιν ἀλλὰ τὴν κίνησιν. τί οὖν ἅμα τῇ μιμήσει φασὶν ἐκεῖνο ὁμοίως ὅσοι τε τὸ ἐν καὶ ὅσοι τοὺς ἀριθμοὺς λέγουσιν; καὶ γὰρ αὐτοὶ τοὺς ἀριθμούς φασιν τὸ ἐν. εἰ δ' ἡ ἔφεσις ἄλλως τε καὶ τοῦ ^[5b] ἀρίστου μετὰ ψυχῆς, εἰ μὴ τις λέγοι καθ' ὁμοιότητα καὶ μεταφοράν, ἔμψυχ' ἂν εἴη τὰ κινούμενα· ψυχῇ δ' ἅμα δοκεῖ καὶ κίνησις ὑπάρχειν· ζωὴ γὰρ τοῖς ἔχουσιν, ἀφ' ἧς καὶ αἱ ὀρέξεις πρὸς ἕκαστον, ὥσπερ καὶ τοῖς ζώοις, ἐπεὶ καὶ αἱ αἰσθήσεις καίπερ ἐν τῷ πάσχειν οὔσαι δι' ἐτέρων ὅμως ἐν ψυχῇ γίνονται. εἰ δ' οὖν τῆς κυκλικῆς αἴτιον τὸ πρῶτον, οὐ τῆς ἀρίστης ἂν εἴη· κρεῖττον γὰρ ἢ τῆς ψυχῆς, καὶ πρώτη δὴ καὶ μάλιστα ἢ τῆς διανοίας, ἀφ' ἧς καὶ ἡ ὄρεξις. Τάχα δὲ καὶ τοῦτ' ἂν τις ἐπιζητήσκειν, διὰ τί τὰ κυκλικά μόνον ἐφετικά, τῶν δὲ περὶ τὸ μέσον οὐθὲν καίπερ κινητῶν ὄντων, πότερον ὡς ἀδύνατα ἢ ὡς οὐ διικνουμένου τοῦ πρώτου· ἀλλὰ τοῦτό γ' ἄτοπον, εἰ δι' ἀσθένειαν· ἰσχυρότερον γὰρ ἂν τις ἀξιώσειεν τοῦ Ὀμήρου Διός, ὅς φησιν

αὐτῇ κεν γαίῃ ἐρύσαιμ' αὐτῇ τε θαλάσῃ.

ἀλλὰ λοιπὸν ὥσπερ ἄδεκτόν τι καὶ ἀσύνετον εἶναι. τάχα δὲ πρότερον ζητήσκειν ἂν τις πῶς ἔχει, πότερα μέρη ταῦτα ἢ οὐ μέρη τοῦ οὐρανοῦ, καὶ εἰ μέρη, πῶς μέρη· νῦν γὰρ οἷον ἀπεωσμένα τῶν ἐντιμοτάτων οὐ μόνον κατὰ τὰς χώρας ἀλλὰ καὶ κατὰ τὴν ἐνέργειαν, εἴ περ ἡ κυκλικὴ τοιαύτη· λαμβάνει γὰρ οἷον κατὰ συμβεβηκὸς ὑπὸ τῆς κυκλικῆς περιφορᾶς καὶ εἰς τοὺς τόπους καὶ εἰς ἄλληλα τὰς μεταβολάς. Εἰ δὲ καὶ τὸ ἄριστον ἀπὸ τοῦ ἀρίστου, κάλλιον ἂν τι παρὰ τοῦ πρώτου δέοι τῆς κυκλοφορίας, εἰ μὴ ἄρ' ἐκωλύετο τῷ μὴ δύνασθαι ^[6a] δέχεσθαι· τὸ γὰρ δὴ πρῶτον καὶ θειότατον πάντα τὰ ἄριστα βουλόμενον. τάχα δὲ τοῦτο μὲν οἷον ὑπερβατόν τι καὶ ἀζήτητον· ἀξιοῖ γὰρ ὁ

τοῦτο λέγων ἅπανθ' ὅμοια καὶ ἐν τοῖς ἀρίστοις εἶναι, μικράν τιν' ἢ μηδεμίαν ἔχοντα διαφοράν. Τόδε δ' ἂν τις ἴσως ἀπορήσειεν πρὸς αὐτὸν τὸν πρῶτον οὐρανὸν ἀναφέρων, πότερον ἢ περιφορὰ τῆς οὐσίας ἐστὶν αὐτοῦ καὶ ἅμα τῷ πεπαῦσθαι φθίρειοι' ἂν, ἢ εἴ περ ἐφέσει τινὶ καὶ ὀρέξει, κατὰ συμβεβηκός· εἰ μὴ ἄρα σύμφυτον αὐτῷ τὸ ὀρέγεσθαι - καὶ οὐθὲν κωλύει τοιαῦτ' ἅττα τῶν ὄντων ὑπάρχειν. ἴσως δ' ἂν εἴη καὶ ἀφελόντα τὴν ὀρεξιν ὑπὲρ αὐτῆς τῆς κινήσεως ἀπορεῖν, εἰ ἀφαιρεθεῖσα φθίρειοι ἂν τὸν οὐρανόν. Καὶ τοῦτο μὲν ὥσπερ ἐτέρων λόγων. ἀπὸ δ' οὖν ταύτης ἢ τούτων τῶν ἀρχῶν ἀξιώσειεν ἂν τις (τάχα δὲ καὶ ἀπὸ τῶν ἄλλων ἄρ', ἂν τις τίθηται) τὰ ἐφεξῆς εὐθὺς ἀποδιδόναι καὶ μὴ μέχρι τοῦ προελθόντα παύεσθαι· τοῦτο γὰρ τελέου καὶ φρονούντος, ὃ περ Ἀρχύτας ποτ' ἔφη ποιεῖν Εὐρυτον διατιθέντα τινὰς ψήφους· λέγειν γὰρ ὡς ὅδε μὲν ἀνθρώπου ὁ ἀριθμός, ὅδε δὲ ἵππου, ὅδε δ' ἄλλου τινὸς τυγχάνει. νῦν δ' οἱ γε πολλοὶ μέχρι τινὸς ἐλθόντες καταπαύονται, καθά περ καὶ οἱ τὸ ἐν καὶ τὴν ἀόριστον δυάδα ποιοῦντες· τοὺς γὰρ ἀριθμοὺς γεννήσαντες καὶ τὰ ἐπίπεδα καὶ τὰ σώματα σχεδὸν τᾶλλα παραλείπουσιν πλὴν ὅσον ἐφαπτόμενοι καὶ τοσοῦτο μόνον δηλοῦντες, ὅτι τὰ μὲν ἀπὸ τῆς ἀορίστου [66] δυάδος, οἷον τόπος καὶ κενὸν καὶ ἄπειρον, τὰ δ' ἀπὸ τῶν ἀριθμῶν καὶ τοῦ ἐνός, οἷον ψυχὴ καὶ ἄλλ' ἅττα· χρόνον δ' ἅμα καὶ οὐρανὸν καὶ ἕτερα δὴ πλείω, τοῦ δ' οὐρανοῦ πέρι καὶ τῶν λοιπῶν οὐδεμίαν ἔτι ποιοῦνται μνεῖαν· ὡσαύτως δ' οἱ περὶ Σπεύσιππον, οὐδὲ τῶν ἄλλων οὐθεὶς πλὴν Ξενοκράτης· οὗτος γὰρ ἅπαντά πως περιτίθησιν περὶ τὸν κόσμον, ὁμοίως αἰσθητὰ καὶ νοητὰ καὶ μαθηματικὰ καὶ ἔτι δὴ τὰ θεῖα. πειρᾶται δὲ καὶ Ἑστιαῖος μέχρι τινός, οὐχ ὥσπερ εἴρηται περὶ τῶν πρώτων μόνον. Πλάτων μὲν οὖν ἐν τῷ ἀνάγειν εἰς τὰς ἀρχὰς δόξειεν ἂν ἅπτεσθαι τῶν ἄλλων εἰς τὰς ἰδέας ἀνάπτων, ταύτας δ' εἰς τοὺς ἀριθμούς, ἐκ δὲ τούτων εἰς τὰς ἀρχάς, εἴτα κατὰ τὴν γένεσιν μέχρι τῶν εἰρημένων· οἱ δὲ τῶν ἀρχῶν μόνον. ἔνιοι δὲ καὶ τὴν ἀλήθειαν ἐν τούτοις· τὰ γὰρ ὄντα μόνον περὶ τὰς ἀρχάς. συμβαίνει δὲ τούναντίον ἢ ἐν ταῖς ἄλλαις μεθόδοις· ἐν ἐκείνοις γὰρ τὰ μετὰ τὰς ἀρχάς ἰσχυρότερα καὶ οἷον τελεώτερα τῶν ἐπιστημῶν· τάχα δὲ καὶ εὐλόγως· ἔνθα μὲν γὰρ τῶν ἀρχῶν, ἐν δὲ ταῖς λοιπαῖς ἀπὸ τῶν ἀρχῶν ἡ ζήτησις.

Πῶς δὲ ποτε χρὴ καὶ ποίας τὰς ἀρχὰς ὑποθέσθαι, τάχ' ἂν ἀπορήσειεν τις, πότερον ἀμόρφους καὶ οἷον δυναμικάς, ὥσπερ ὅσοι πῦρ καὶ γῆν, ἢ μεμορφωμένας, ὡς μάλιστα δεόν ταύτας ὀρίσθαι, καθά περ ἐν τῷ Τιμαίῳ φησὶν· τοῖς γὰρ τιμωτάτοις οἰκειότατον ἢ τάξις καὶ τὸ ὀρίσθαι.

[7a] φαίνεται δὲ καὶ ἐν ταῖς λοιπαῖς σχεδὸν ἔχειν οὕτω, καθά περ ἐν

γραμματικῇ καὶ μουσικῇ καὶ ταῖς μαθηματικαῖς, συνακολουθεῖ δὲ καὶ τὰ μετὰ τὰς ἀρχάς· ἔτι δὲ καὶ κατὰ τὰς τέχνας ὁμοίως, αἱ περ τὴν φύσιν μιμοῦνται, καὶ τὰ ὄργανα καὶ τὰ ἄλλα κατὰ τὰς ἀρχάς. οἱ μὲν οὖν ἐμμόρφους πάσας, οἱ δὲ μόνον τὰς ὑλικάς· οἱ δ' ἄμφω, τὰς τ' ἐμμόρφους καὶ τὰς τῆς ὕλης, ὥς ἐν ἀμφοῖν τὸ τέλεον ὄν· οἷον γὰρ ἐξ ἀντικειμένων τὴν ἅπασαν οὐσίαν. ἄλογον δὲ κάκεινοις δόξειεν ἂν, εἰ ὁ μὲν ὅλος οὐρανὸς καὶ ἕκαστα τῶν μερῶν ἅπαντ' ἐν τάξει καὶ λόγῳ καὶ μορφαῖς καὶ δυνάμεσιν καὶ περιόδοις, ἐν δὲ ταῖς ἀρχαῖς μὴ ἐν τοιοῦτον ἄλλ' "ὥσπερ σάρμα εἰκῇ κεχυμένων ὁ κάλλιστος", φησὶν Ἡράκλειτος, "[ὁ] κόσμος". καὶ κατὰ τοῦλάχιστον δ' ὥς εἰπεῖν λαμβάνουσιν ὁμοίως ἐν ἀψύχοις καὶ ἐμψύχοις· ὠρισμένοι γὰρ ἐκάστων αἱ φύσεις ὥς εἰπεῖν καὶ περ αὐτομάτως γινομένων· τὰς δ' ἀρχὰς ἀορίστους εἶναι. Χαλεπὸν δὲ πάλιν αὖ τὸ τοὺς λόγους ἐκάστοις περιθεῖναι πρὸς τὸ ἕνεκά του συνάγοντας ἐν ἅπασιν, καὶ ἐν ζώοις καὶ φυτοῖς καὶ ἐν αὐτῇ πομφόλυγι· πλὴν εἰ συμβαίνει τῇ ἐτέρων τάξει καὶ μεταβολῇ μορφάς [76] τε παντοίας καὶ ποικιλίας γίνεσθαι τῶν περὶ τὸν ἀέρα καὶ τὴν γῆν· ὧν δὴ μέγιστόν τινες παράδειγμα ποιοῦνται τὰ περὶ τὰς ὥρας τὰς ἐτησίους, ἐν αἷς καὶ ζώων καὶ φυτῶν καὶ καρπῶν γενέσεις, οἷον γεννῶντος τοῦ ἡλίου. καὶ ταῦτα μὲν ἐνταῦθ' αὖ που ζητεῖ τὴν σκέψιν, ἀφορισμὸν ἀπαιτοῦντα μέχρι πόσου τὸ τεταγμένον, καὶ διὰ τί τὸ πλεον ἄδύνατον ἢ εἰς τὸ χεῖρον ἢ μετάβασις.

Ἐν δὲ ταῖς ἀρχαῖς, ὅθεν δὴ καὶ ὁ πρῶτος λόγος, εἰκότως ἂν τις καὶ τὸ περὶ τῆς ἡρεμίας ἀπορήσειεν. εἰ μὲν γὰρ ὥς βέλτιον, ἀνάψειεν ἂν ταῖς ἀρχαῖς· εἰ δ' ὥς ἀργία καὶ στέρησις τις κινήσεως, οὐκ ἀνάψει, ἀλλ' εἴ περ, τὴν ἐνέργειαν ἀντιμεταλλακτέον ὥς προτέραν καὶ τιμιωτέραν, τὴν δὲ κίνησιν ἐν τοῖς αἰσθητοῖς· ἐπεὶ τό γε διὰ τοῦτ' ἡρεμεῖν ὥς ἄδύνατον ἀεὶ κινούμενον εἶναι τὸ κινεῖν - οὐ γὰρ ἂν εἴη πρῶτον - κίνδυνος μὴ λογῶδες, καὶ ἄλλως οὐκ ἀξιόπιστον, ἀλλὰ μείζω τινὰ αἰτίαν ζητεῖ. δοκεῖ δὲ καὶ ἡ αἴσθησις τρόπον τινὰ συναυδᾶν ὥς ἐνδεχόμενον μὴ ἀεὶ τὸ κινεῖν ἕτερον εἶναι καὶ ὃ κινεῖ διὰ τὸ ποιεῖν καὶ πάσχειν· ἔτι δ' ἐάν τις ἐπ' αὐτὸν ἄγῃ τὸν νοῦν καὶ τὸν θεόν. ἄτοπον δὲ καὶ τὸ ἕτερον λε[80]χθέν, [8a] ὥς οὐ μιμοῦνται τὰ ὀρεγόμενα τοῦ ἡρεμοῦντος· τί γὰρ αὐτοῖς οὐ συνακολουθεῖ ἡ τῶν ἄλλων; πλὴν ἴσως οὐχ ὁμοίως ληπτέον ὥς εἰς τὸ ἀμερὲς ἄγοντας, ἀλλ' ὅπως ὃ τι μάλιστα σύμφωνον ἑαυτῷ καὶ ἀπηρτισμένον ὥς ἂν πόλις ἢ ζῶον ἢ ἄλλο τι τῶν μεριστῶν ἢ καὶ ὁ ὅλος οὐρανός, ὃν δὴ φασιν εἶναι τελεώτατον.

Ἐπιποθεῖ δέ τινα καὶ τὰ τοιαῦδε λόγον, πῶς ποτε τῶν ὄντων ὁ μερισμὸς εἰς ὕλην καὶ μορφήν, πότερον ὥς τὸ μὲν ὄν, τὸ δὲ μὴ ὄν, δυνάμει δ' ὄν καὶ

ἀγόμενον εἰς ἐνέργειαν· ἢ ὃν μὲν, ἀόριστον δὲ καθά περ ἐν ταῖς τέχναις, ἧ δὲ γένεσις, ἡ οὐσία γ' αὐτῶν τῷ μορφοῦσθαι κατὰ τοὺς λόγους· ἀλλ' οὕτω γ' εἰς μὲν τὸ βέλτιον τάχ' ἂν ἡ μετάβασις εἴη, τὸ δ' εἶναι οὐθὲν ἂν ἦττον ἀληθὲς ὑπάρχοι κατ' αὐτήν (οὐ γὰρ ἂν οὐδὲ γίνοιτο μὴ ὑπαρχούσης), ἀλλὰ τὸ μῆτε τόδε μῆτε ποιὸν μῆτε ποσόν, ὡς ἀόριστον τοῖς εἶδεσιν, δύναμιν δέ τιν' ἔχον. ὅλως δὲ κατ' ἀναλογίαν ληπτέον ἐπὶ τὰς τέχνας καὶ εἰ τις ὁμοιότης ἄλλη.

Δόξειεν δ' ἂν καὶ τοῦτ' ἔχειν ἀπορίαν, εἰ μὴ ἄρα περιεργίαν τοῦ ζητεῖν, τί δὴ ποτε ἡ φύσις καὶ ἡ ὅλη δ' οὐσία τοῦ παντὸς ἐν ἐναντίοις ἐστίν, καὶ σχεδὸν ἰσομοιρεῖ τὸ χεῖρον τῷ βελτίονι, μᾶλλον δὲ καὶ πολλῷ πλεόν ἐστίν, ὥστε δοκεῖν καὶ Εὐριπίδην καθόλου λέγειν ὡς “οὐκ ἂν γένοιτο χωρὶς ἐσθλά”. ὁ δὲ τοιοῦτος λόγος ἐγγὺς τοῦ [8b] ζητεῖν ὅ τι οὐ πάντ' ἀγαθὰ οὐδὲ πάντα ὅμοια, καὶ ὅ τι κατὰ πάντων μὲν τὸ εἶναι λέγομεν, οὐθὲν δὲ ὅμοιον ἀλλήλοισ, καθά περ τὰ λευκὰ καὶ μέλανα, ἐν αὐτοῖς. ἔτι δὲ τὸ δοκοῦν παραδοξότερον, ὡς οὐχ οἶόν τε τὸ ὄν ἄνευ τῶν ἐναντίων. οἱ δ' ἔτι πλέονι τῷ παραδόξῳ χρώμενοι καὶ τὸ μὴ ὄν μηδὲ γεγρονὸς μηδὲ μέλλον προσκαταριθμοῦσιν εἰς τὴν τοῦ παντὸς φύσιν. ἀλλ' ἦδε μὲν οἶον ὑπερβατός τις σοφία.

Τὸ δὲ ὄν ὅτι πολλαχῶς, φανερόν· ἡ γὰρ αἴσθησις καὶ τὰς διαφορὰς θεωρεῖ καὶ τὰς αἰτίας ζητεῖ· τάχα δ' ἀληθέστερον εἰπεῖν ὡς ὑποβάλλει τῇ διανοίᾳ τὰ μὲν ἀπλῶς ζητοῦσα, τὰ δ' ἀπορίαν ἐνεργαζομένη, δι' ἧς, κἂν μὴ δύνηται προβαίνειν, ὅμως ἐμφαίνεται τι φῶς ἐν τῷ μὴ φωτὶ ζητούντων ἐπὶ πλεόν. τὸ ἐπίστασθαι ἄρα οὐκ ἄνευ διαφορᾶς τινος. εἰ τε γὰρ ἕτερα ἀλλήλων, διαφορά τις· ἐν τε τοῖς καθόλου πλειόνων ὄντων τῶν ὑπὸ τὰ καθόλου διαφέρειν ἀνάγκη καὶ ταῦτα, ἐάν τε γένη τὰ καθόλου ἐάν τ' εἶδη. σχεδὸν δὲ καὶ ἐπιστήμη πᾶσα τῶν ιδίων· ἢ τε γὰρ οὐσία καὶ τὸ τί ἦν εἶναι καθ' ἕκαστον ἴδιον, τὰ τε θεωρούμενα καθ' ἑαυτὰ καὶ οὐ κατὰ συμβεβηκὸς ἦν ἂν τι κατὰ τινός. ὅλως δὲ τὸ ἐν πλείοσιν τὸ αὐτὸ συνιδεῖν ἐπιστήμης, ἥτοι κοινῇ καὶ καθόλου λεγόμενον ἢ ἰδίᾳ πως καθ' ἕκαστον, οἶον ἀριθμοῖς γραμμαῖς, ζώοις φυτοῖς· τέλος δ' ἡ ἐξ ἀμφοῖν. ἔστιν δ' [9a] ἐνίων μὲν καθόλου τέλος (ἐν τούτῳ γὰρ τὸ αἵτιον), τῶν δὲ τὸ ἐν μέρει, καθ' ὅσα διαιρέσεις εἰς τὰ ἄτομα, καθά περ ἐν τοῖς πρακτοῖς καὶ ποιητοῖς· οὕτως γὰρ αὐτῶν ἡ ἐνέργεια. Ταῦτῳ δ' ἐπιστάμεθα καὶ οὐσία καὶ ἀριθμῷ καὶ εἶδει καὶ γένει καὶ ἀναλογίᾳ καὶ εἰ ἄρα παρὰ ταῦτα διαιρέσεις· διὰ πλείστου δὲ τὸ κατ' ἀναλογίαν, ὡς ἂν ἀπέχοντος πλείστον, τὰ μὲν δι' ἡμᾶς αὐτούς, τὰ δὲ διὰ τὸ ὑποκείμενον, τὰ δὲ διὰ τὰμφο.

Πλεοναχῶς δ' ὄντος τοῦ ἐπίστασθαι, πῶς ἕκαστα μεταδιωκτέον; ἀρχὴ καὶ μέγιστον ὁ οἰκεῖος τρόπος, οἶον τὰ πρῶτα καὶ νοητά, καὶ τὰ κινητὰ καὶ ὑπὸ

τὴν φύσιν, αὐτῶν τε τούτων τὰ ἐν ἀρχῇ καὶ <τὰ> ἐπόμενα μέχρι ζώων καὶ φυτῶν καὶ ἐσχάτων τῶν ἀψύχων. ἔστιν γάρ τι καθ' ἕκαστον γένος ἴδιον, ὥσπερ καὶ ἐν τοῖς μαθηματικοῖς. ἔχει δὲ καὶ αὐτὰ τὰ μαθήματα διαφορὰν καὶ περ ὁμογενῇ πως ὄντα, διήρηται δ' ἱκανῶς. εἰ δὲ καὶ ἔνια γνωστὰ τῷ ἄγνωστα εἶναι, καθὰ πέρ τινες φασιν, ἴδιος ἂν ὁ τρόπος εἴη, διαιρέσεως δέ τινος δεῖται· τάχα δ' ἐφ' ὧν ἐνδέχεται, κατ' ἀναλογίαν οἰκειότερον λέγειν ἢ αὐτῷ τῷ ἀγνώστῳ, καθὰ περ εἰ τις τῷ ἀοράτῳ τὸ ἀόρατον. πόσοι δ' οὖν τρόποι καὶ ποσαχῶς τὸ εἰδέναι, πειρατέον διελεῖν. ἢ δ' ἀρχὴ πρὸς αὐτὰ ταῦτα καὶ πρῶτον τὸ ἀφορίσαι τί τὸ ἐπίστασθαι. χαλεπώτερον δ' ἂν δόξειεν (οὐ γὰρ οἶόν τε καθόλου καὶ κοινόν τι λαβεῖν ^[9b] ἐν τοῖς πλεοναχῶς λεγομένοις). ἢ καὶ τοῦτ' ἄπορον ἢ οὐ ῥάδιόν γε εἰπεῖν, μέχρι πόσου καὶ τίνων ζητητέον αἰτίας ὁμοίως ἐν τε τοῖς αἰσθητοῖς καὶ νοητοῖς· ἢ γὰρ εἰς τὸ ἄπειρον ὁδὸς ἐν ἀμφοῖν ἀλλοτρία καὶ ἀναιρουσα τὸ φρονεῖν. ἀρχαὶ δὲ τρόπον τινὰ ἄμφω. τάχα δ' ἢ μὲν ἡμῖν ἢ δ' ἀπλῶς, ἢ τὸ μὲν τέλος ἢ δ' ἡμετέρα τις ἀρχή. μέχρι μὲν οὖν τινὸς δυνάμεθα δι' αἰτίου θεωρεῖν, ἀρχὰς ἀπὸ τῶν αἰσθήσεων λαμβάνοντες· ὅταν δὲ ἐπ' αὐτὰ τὰ ἄκρα καὶ πρῶτα μεταβαίνωμεν, οὐκέτι δυνάμεθα, εἴτε διὰ τὸ μὴ ἔχειν αἰτίαν εἴτε διὰ τὴν ἡμετέραν ἀσθένειαν ὥσπερ πρὸς τὰ φωτεινότατα βλέπειν. τάχα δ' ἐκεῖνο ἀληθέστερον ὡς αὐτῷ τῷ νῷ τῶν τοιούτων ἢ θεωρία θιγόντι καὶ οἶον ἀψαμένῳ, διὸ καὶ οὐκ ἔστιν ἀπάτη περὶ αὐτά. Χαλεπὴ δὲ καὶ εἰς αὐτὸ τοῦθ' ἢ σύνεσις καὶ ἢ πίστις, ἐπεὶ καὶ ἄλλως μέγα καὶ πρὸς τὰς καθ' ἕκαστα πραγματείας ἀναγκαῖον καὶ μάλιστα τὰς μεγίστας, ἐν τίνι ποιητέον τὸν ὅρον, οἶον περὶ τὰς τῆς φύσεως καὶ περὶ τὰς ἔτι προτέρας. οἱ γὰρ ἀπάντων ζητοῦντες λόγον ἀναιρουσιν λόγον, ἅμα δὲ καὶ τὸ εἰδέναι· μᾶλλον δ' ἀληθέστερον εἰπεῖν ὅτι ζητοῦσιν ὧν οὐκ ἔστιν οὐδὲ πέφυκεν. ὅσοι <δὲ> τὸν οὐρανὸν αἰδίων ὑπολαμβάνουσιν, ἔτι δὲ τὰ κατὰ τὰς φορὰς καὶ τὰ μεγέθη καὶ τὰ σχήματα καὶ τὰς ἀποστάσεις καὶ ὅσα ἄλλα ἀστρολογία δείκνυσιν, τούτοις κατάλοιπον ^[10a] τά τε πρῶτα κινουντα καὶ τὸ τίνος ἕνεκα λέγειν καὶ τίς ἢ φύσις ἐκάστου καὶ ἢ πρὸς ἄλληλα θέσις καὶ ἢ τοῦ σύμπαντος οὐσία καὶ ὑποβαίνουντι δὴ πρὸς τὰ ἄλλα καθ' ἕκαστον τῶν εἰδῶν ἢ μερῶν ἄχρι ζώων καὶ φυτῶν. εἰ οὖν ἀστρολογία συνεργεῖ μὲν, οὐκ ἐν τοῖς πρώτοις δὲ τῆς φύσεως, ἕτερα τὰ κυριώτατ' ἂν εἴη καὶ πρότερα· καὶ γὰρ δὴ καὶ ὁ τρόπος, ὡς οἶονταί τινες, οὐ φυσικὸς ἢ οὐ πᾶς. καίτοι τό γε κινεῖσθαι καὶ ἀπλῶς τῆς φύσεως οἰκεῖον καὶ μάλιστα τοῦ οὐρανοῦ. διὸ καὶ εἰ ἐνέργεια τῆς οὐσίας ἐκάστου καὶ τὸ καθ' ἕκαστον ὅταν ἐνεργῇ καὶ κινεῖται, καθὰ περ ἐν τοῖς ζῳοῖς καὶ φυτοῖς (εἰ δὲ μή, ὁμώνυμα), δῆλον ὅτι καὶ ὁ οὐρανὸς ἐν τῇ

περιφορᾷ κατὰ τὴν οὐσίαν εἶη, χωριζόμενος δὲ καὶ ἡρεμῶν ὁμώνυμος· οἶον γὰρ ζωὴ τις ἢ περιφορὰ τοῦ παντός. ἄρ' οὖν εἴ γε μὴδ' ἐν τοῖς ζώοις τὴν ζωὴν ἢ ὠδὶ ζητητέον, οὐδ' ἐν τῷ οὐρανῷ καὶ τοῖς οὐρανίοις τὴν φορὰν ἢ τρόπον τινὰ ἀφωρισμένον; συνάπτει δὲ πῶς ἢ νῦν ἀπορία καὶ πρὸς τὴν ὑπὸ τοῦ ἀκινήτου κίνησιν.

Ὑπὲρ δὲ τοῦ πάνθ' ἔνεκά του καὶ μὴδὲν μάτην, ἄλλως <θ> ὁ ἀφορισμὸς οὐ ῥᾶδιος, καθὰ περ πλεονάκις λέγεται (πόθεν δ' ἄρξασθαι χρὴ καὶ εἰς ποῖα τελευτᾶν;), καὶ δὴ ἔνια τῷ μὴ δοκεῖν ἔχειν οὕτως ἀλλὰ τὰ μὲν συμπτωματικῶς τὰ δ' ἀνάγκη τινί, καθὰ περ ἐν τε τοῖς οὐρανίοις καὶ ἐν τοῖς περὶ τὴν γῆν πλείοσιν. τίνος γὰρ ἔνεκα αἱ ἔφοδοι ^[10b] καὶ ἀνάρροισι θαλάττης [ἢ τίνος αἱ προχωρήσεις] ἢ ἀναξηράνσεις καὶ ὑγρότητες καὶ ὅλως πρὸς ἄλλοτ' ἄλλο μεταβολαὶ καὶ φθοραὶ καὶ γενέσεις, [ἢ αἱ μὲν ἐν αὐτῇ τῇ γῇ ἀλλοιώσεις καὶ μεταβολαὶ γίνονται πρὸς ἄλλοτ' ἄλλο μεθισταμένων] καὶ ἕτερα δ' οὐκ ὀλίγα παρόμοια τούτοις; ἔτι δ' ἐν αὐτοῖς τοῖς ζώοις τὰ μὲν ὥσπερ μάταια, καθὰ περ τοῖς ἄρρεσιν οἱ μαστοὶ καὶ τοῖς θήλεσιν ἡ πρόεσις, εἴ περ μὴ συμβάλλεται, καὶ πάγωνος δ' ἐνίοις ἢ ὅλως τριχῶν ἔκφυσις ἐν τισιν τόποις· ἔτι δὲ κεράτων μεγέθη καθὰ περ τῶν ἐλάφων τοῖς <οὐκ ὠφελουμένοις, τοῖς> δὲ καὶ λελωβημένοις κνήσει τε καὶ παραιωρήσει καὶ ἐπιπροσθήσει τῶν ὁμμάτων· καὶ ὥς ἔνια δὴ βία ἢ παρὰ φύσιν, ὥσπερ ὁ ἐρῳδιὸς ὀχεύει καὶ τὸ ἡμερόβιον ζῆ· καὶ ἕτερα οὐκ ὀλίγα λάβοι τις ἂν τοιαῦτα. Καὶ τὸ μέγιστον δὴ καὶ μάλιστα δοκοῦν περὶ τὰς τροφὰς καὶ γενέσεις τῶν ζώων· οὐθενὸς γὰρ ταῦθ' ἔνεκα, ἀλλὰ συμπτώματα καὶ δι' ἐτέρας ἀνάγκας. ἔδει γάρ, εἴ περ τούτων χάριν, αἰεὶ κατὰ ταῦτα καὶ ὡσαύτως. ἔτι δ' ἐν τοῖς φυτοῖς καὶ μᾶλλον τοῖς ἀψύχοις ὠρισμένην τιν' ἔχουσι φύσιν, ὥσπερ δοκοῦσιν, καὶ μορφαῖς καὶ εἶδεσιν καὶ δυνάμεσιν, τίνος ἔνεκα ταῦτα ζητήσκειν ἂν τις. (αὐτὸ γὰρ τοῦτο ἄπορον τὸ μὴ ἔχειν λόγον, καὶ ταῦτ' ἐν ἐτέροις μὴ ποιοῦσιν προτέροις καὶ τιμιωτέροις. ἦ καὶ ἔοικεν ὁ λόγος ἔχειν τι πιστόν, ὥς ἄρα τῷ αὐτομάτῳ ταῦτα καὶ τῇ τοῦ ὅλου περιφορᾷ λαμβάνει τινὰς ιδέας ἢ πρὸς ἄλληλα ^[11a] διαφοράς.) εἰ δὲ μή, τοῦ θ' ἔνεκά του καὶ εἰς τὸ ἄριστον ληπτέον τινὰς ὅρους καὶ οὐκ ἐπὶ πάντων ἀπλῶς θετέον· ἐπεὶ καὶ τὰ τοιάδε ἔχει τινὰ διστασμὸν καὶ ἀπλῶς λεγόμενα καὶ καθ' ἕκαστον· ἀπλῶς μὲν ὅτι τὴν φύσιν <εἰκὸς> ἐν ἅπασιν ὀρέγεσθαι τοῦ ἀρίστου καὶ ἐφ' ᾧ ἐνδέχεται μεταδιδόναι τοῦ αἰεὶ καὶ τοῦ τεταγμένου· ὥς δ' αὕτως καὶ ἐπὶ τῶν ζώων ὁμοίως· ὅπου γὰρ οἶόν τε τὸ βέλτιον, ἐνταῦθα οὐδαμοῦ παραλείπει, οἶον τὸ ἔμπροσθεν τὴν φάρυγγα τοῦ οἰσοφάγου (τιμιώτερον γάρ), καὶ ἐν τῇ μέσῃ κοιλίᾳ τῆς καρδίας τὴν κρᾶσιν ἀρίστην, ὅτι τὸ μέσον

τιμώτατον· ὡσαύτως δὲ καὶ ὅσα κόσμου χάριν· εἰ γὰρ καὶ ἡ ὄρεξις οὕτως, ἀλλ' ἐκεῖνό γ' ἐμφαίνει διότι πολὺ τὸ οὐχ ὑπακοῦον οὐδὲ δεχόμενον τὸ εὖ, μᾶλλον δὲ πολλῷ πλεῖον· ὀλίγον γάρ τι τὸ ἔμψυχον, ἄπειρον δὲ τὸ ἄψυχον· καὶ αὐτῶν τῶν ἐμψύχων ἀκαριαίου καὶ βέλτιον τὸ εἶναι. τὸ δ' ὅλον σπάνιον τι καὶ ἐν ὀλίγοις τὸ ἀγαθόν, πολὺ δὲ πληθος εἶναι τὸ κακόν, οὐκ ἐν ἀοριστία δὲ μόνον καὶ οἷον ὕλης εἶδει, καθά περ τὰ τῆς φύσεως, ἀμαθεστάτου. εἰκῇ γὰρ οἱ περὶ τῆς ὅλης οὐσίας λέγοντες ὥσπερ Σπεύσιππος σπάνιον τι τὸ τίμιον ποιεῖ τὸ περὶ τὴν τοῦ μέσου χώραν, τὰ δ' ἄκρα καὶ ἐκατέρωθεν. τὰ μὲν οὖν ὄντα καλῶς ἔτυχεν ὄντα.

Πλάτων δὲ καὶ οἱ Πυθαγόρειοι μακρὰν τὴν ^[11b] ἀπόστασιν, ἐπιμιμεῖσθαι δ' ἐθέλειν ἅπαντα· καίτοι καθά περ ἀντίθεσιν τινα ποιοῦσιν τῆς ἀορίστου δυάδος καὶ τοῦ ἐνός, ἐν ἧ καὶ τὸ ἄπειρον καὶ τὸ ἄτακτον καὶ πᾶσα ὡς εἰπεῖν ἀμορφία καθ' αὐτήν, ὅλως οὐχ οἷόν τε ἄνευ ταύτης τὴν τοῦ ὅλου φύσιν, ἀλλ' οἷον ἰσομοιεῖν ἢ καὶ ὑπερέχειν τῆς ἐτέρας· ἢ καὶ τὰς ἀρχὰς ἐναντίας. διὸ καὶ οὐδὲ τὸν θεόν, ὅσοι τῷ θεῷ τὴν αἰτίαν ἀνάπτουσιν, δύνασθαι πάντ' εἰς τὸ ἄριστον ἄγειν, ἀλλ' εἴ περ, ἐφ' ὅσον ἐνδέχεται· τάχα δ' οὐδ' ἂν προέλοιτ', εἴ περ ἀναιρεῖσθαι συμβήσεται τὴν ὅλην οὐσίαν ἐξ ἐναντίων γε καὶ <ἐν> ἐναντίοις οὔσαν. φαίνεται δὲ καὶ ἐν τοῖς πρώτοις ἐπιθεωρούμενα πολλὰ καὶ ὡς ἔτυχεν, οἷον τὰ περὶ τὰς τῆς γῆς λεχθέντα μεταβολάς· οὔτε γὰρ τὸ βέλτιον οὔτε τὸ τινὸς χάριν, ἀλλ' εἴ περ, ἀνάγκη τινὶ κατακολουθεῖν· πολλὰ δὲ καὶ ἐν τῷ ἀέρι τοιαῦτα καὶ ἐν ἄλλοις. μάλιστα δ' ἂν δόξειεν ἔχειν τὴν γε τάξιν τῶν μὲν αἰσθητῶν τὰ οὐράνια, τῶν δ' ἄλλων, εἰ μὴ ἄρα καὶ πρότερα τούτων, τὰ μαθηματικά· εἰ γὰρ καὶ μὴ πᾶν ἄλλ' ἐν τούτοις πλέον τὸ τεταγμένον. πλὴν εἴ τις τοιαύτας λαμβάνοι τὰς μορφὰς οἷας Δημόκριτος ὑποτίθεται τῶν ἀτόμων.

Ἀλλὰ δὴ τούτων μὲν πέρι σκεπτέον· ὃ δ' ἐξ ἀρχῆς ἐλέχθη, πειρατέον τινα λαμβάνειν ὅρον καὶ ἐν τῇ φύσει καὶ ἐν τῇ τοῦ σύμπαντος οὐσίᾳ καὶ τοῦ ἑνεκά του καὶ τῆς εἰς τὸ βέλτιον ὁρμῆς. αὕτη ^[12a] γὰρ ἀρχὴ τῆς τοῦ σύμπαντος θεωρίας, ἐν τίσιν τὰ ὄντα καὶ πῶς ἔχει πρὸς ἄλληλα.

De pietate

ΘΕΟΦΡΑΣΤΟΣ, ΠΕΡΙ ΕΥΣΕΒΕΙΑΣ

[1] (Porphyrios, De abstin. II 2,17-19 Nauck²) οὐ γὰρ εἴ τινα δεῖ, καὶ πάντα, ὡς οὐδ' εἰ τὰ ἄλογα ζῶα, πάντως καὶ ἀνθρώπους.

[2] (Porph., ibid. II 57, 9; Bernays, Exz. 1) Ἀνάριθμος μὲν τις ἔοικεν εἶναι χρόνος, ἀφ' οὗ τό γε πάντων λογιώτατον γένος καὶ τὴν ἱερωτάτην ὑπὸ τοῦ Νείλου κτισθεῖσαν χώραν κατοικοῦν ἤρξατο πρῶτον ἀφ' Ἑστίας τοῖς οὐρανίοις θεοῖς θύειν οὐ σμύρνης οὐδὲ κασίας καὶ λιβανωτοῦ κρόκῳ μιχθέντων ἀπαρχάς· πολλαῖς γὰρ γενεαῖς ὕστερον παρελήφθη ταῦτα, καὶ πλάνης καὶ μαστὴρ ὁ ἄνθρωπος γιγνώμενος τῆς ἀναγκαίας ζωῆς μετὰ πολλῶν πόνων καὶ δακρύων σταγόνας τούτων ἀπὴρξάτ' ἂν τοῖς θεοῖς. οὐ τούτων οὖν ἔθυσον πρότερον, ἀλλὰ χλόης, οἰοῦντι τινα τῆς γονίμου φύσεως χνοῦν ταῖς χερσὶν ἀράμενοι. δένδρα μὲν γὰρ δὴ πρὸ ζώων ἀνέδωκεν ἡ γῆ, τῶν δένδρων δὲ πολὺ πρόσθεν τὴν ἐπέτειον γεννωμένην πόαν, ἣς δρεπόμενοι φύλλα καὶ ρίζας καὶ τοὺς ὅλους τῆς φύσεως αὐτῶν βλαστοὺς κατέκαιον, ταύτη τοὺς φαινομένους οὐρανίους θεοὺς τῇ θυσίᾳ δεξιούμενοι καὶ τοῦ πυρὸς ἀπαθανατίζοντες αὐτοῖς τὰς τιμάς. τούτοις γὰρ καὶ τὸ πῦρ ἀθάνατον ἐφύλαττον ἐν τοῖς ἱεροῖς ὡς ὃν μάλιστα αὐτοῖς ὁμοιότατον. ἐκ δὲ τῆς θυμιάσεως τῶν ἀπὸ γῆς θυμιατηρίᾳ τε ἐκάλουν καὶ τὸ θύειν καὶ θυσίας· ἃ δὴ ἡμεῖς ὡς τὴν ὑστέραν πλημμέλειαν σημαίνοντα οὐκ ὀρθῶς ἐξακούομεν, τὴν διὰ τῶν ζώων δοκοῦσαν θεραπείαν καλοῦντες θυσίαν. τοσοῦτον δὲ τοῖς παλαιοῖς τοῦ μὴ παραβαίνειν τὸ ἔθος ἔμελεν, ὡς κατὰ τῶν ἐκλειπόντων τὸ ἀρχαῖον, ἐπεισαγόντων δὲ ἕτερον ἀρασαμένους ἀρώματα τὰ θυμιώμενα νῦν προσαγορευῆσαι. τὴν δὲ ἀρχαιότητα τῶν εἰρημένων θυμιαμάτων κατίδοι τις ἂν ἐπιβλέψας, ὅτι πολλοὶ καὶ νῦν ἔτι θύουσι συγκεκομμένα τῶν εὐωδῶν ξύλων τινά. ὅθεν μετὰ τὴν ἐξ ἀρχῆς πόαν δενδροφουσίης ἤδη τῆς γῆς, πρώτης δρυὸς καρποφαγήσαντες, τῆς μὲν τροφῆς διὰ τὴν σπάνιν μικρά, τῶν δὲ φύλλων αὐτῆς πλείω τοῖς θεοῖς εἰς τὰς θυσίας ἀνήπτον. μετὰ δὲ ταῦτα ὁ βίος ἐπὶ τὴν ἡμερον ἤδη τροφὴν μεταβαίνων καὶ θύματα <τὰ> ἐκ τῶν καρπῶν 'ἄλις δρυὸς' ἔφη. τοῦ δὲ Δημητρίου καρποῦ μετὰ τὸν χέδροπα πρώτου φανέντος κριθῶν, ταύταις ἀπ' ἀρχῆς μὲν οὐλοχυτεῖτο κατὰ τὰς πρώτας θυσίας τὸ τῶν ἀνθρώπων γένος· ὕστερον δὲ ἐρεϊξαμένων τε αὐτὰς καὶ τὴν τροφὴν ψαισαμένων τὰ μὲν τῆς ἐργασίας ὄργανα θεῖαν τοῖς βίοις ἐπικουρίαν παρασχόντα κρύψαντες εἰς

ἀπόρρητον ὡς ἱεροῖς αὐτοῖς ἀπήντων, τοῦ δ' ἄλληλεμένου βίου παρὰ τὸν πρόσθεν μακαρισθέντος, ἀπῆρξαντό τι τῆς ψαισθείσης τροφῆς πρῶτον εἰς πῦρ τοῖς θεοῖς. ὅθεν ἔτι καὶ νῦν πρὸς τῷ τέλει τῶν θυγλῶν τοῖς ψαισθεῖσι θυλήμασι χρώμεθα, μαρτυροῦντες μὲν τῷ πραττομένῳ τὴν ἐξ ἀρχῆς τῶν θυμάτων αὔξησιν, οὐ συνορῶντες δὲ τίνος χάριν τούτων ἕκαστα δρῶμεν. ἀφ' ὧν ὁρμωμένοις ἡμῖν, καὶ τῶν καρπῶν ἀλλὰ καὶ τῶν πυρῶν ἀφθονωτέρων γιγνομένων, προσετίθεντο πελάνων ἤδη καὶ τῶν λοιπῶν ἀπάντων ἀπαρχαὶ τοῖς θεοῖς εἰς τὰς θυσίας· πολλὰ μὲν ἀνθολογούντων, οὐκ ἐλάττω δὲ τούτων μιγνύντων τῶν τότε, εἴ τι καλὸν εἶχον ἐν βίῳ καὶ πρέπον ὁσμῇ πρὸς θεῖαν αἴσθησιν. καὶ τὰ μὲν στέφοντες, τὰ δ' εἰς πῦρ δωροῦμενοι, θείας ἐτέρας σταγόνας οἴνου καὶ μέλιτος ἔτι δ' ἐλαίου ταῖς χρεῖαις ἀνευρίσκοντες ἀπῆρχοντο καὶ τούτων τοῖς αἰτίοις θεοῖς. οἷς μαρτυρεῖν ἔοικεν καὶ ἡ Ἀθήνησιν ἔτι καὶ νῦν δρωμένη πομπὴ Ἥλιου τε καὶ Ὠρῶν. πομπεύει γὰρ εἰλυσπόα, ἄγρωστις, ἐπὶ πυρηνίων ἡγηρίας, ὄσπρια, δρυς, μιμαΐκυλα, κριθαί, πυροί, παλάθη ἡγητηρία, ἀλεύρων πυρίνων καὶ κριθίνων φθοῖς, ὀρθοστάτης, χύτρος. πόρρω δὲ τῶν περὶ τὰς θυσίας ἀπαρχῶν τοῖς ἀνθρώποις προΐουσῶν παρανομίας, ἢ τῶν δεινοτάτων θυμάτων παράληψις ἐπεισέχθη, ὡμότητος πλήρης, ὡς δοκεῖν τὰς πρόσθεν λεχθείσας καθ' ἡμῶν ἀρὰς νῦν τέλος εἰληφέναι, σφαζάντων τῶν ἀνθρώπων καὶ τοὺς βωμοὺς αἱμαζάντων, ἀφ' οὗ λιμῶν τε καὶ πολέμων πειραθέντες αἱμάτων ἦσαντο.

[3] (Porph., *ibid.* II 7,108; Bernays, *Exz.* 2) τοιγὰρ οὖν τὸ δαιμόνιον τούτων ἐκατέρων νεμεσῆσαν ἐπιθεῖναι τὴν πρέπουσαν ἔοικε τιμωρίαν. καθὼ οἱ μὲν ἄθεοι γεγόνασι τῶν ἀνθρώπων, οἱ δὲ κακόφρονες μᾶλλον ἢ κακόθεοι λεχθέντες ἂν ἐν δίκῃ, διὰ τὸ φαύλους καὶ μηθὲν ἡμῶν βελτίους ἡγεῖσθαι τὴν φύσιν εἶναι τοὺς θεοὺς, οὕτως οἱ μὲν ἄθυτοι φαίνονται γενέσθαι τινές, οὐδεμίαν ἀπαρχὴν τῶν ὑπαρχόντων ποιούμενοι τοῖς θεοῖς, οἱ δὲ κακόθυτοι καὶ παρανόμων ἀψάμενοι θυμάτων. διὸ Θῶες μὲν οἱ ἐν μεθορίοις Θράκης οἰκήσαντες μηδενὸς ἀπαρχόμενοι μηδὲ θύοντες, ἀνάρπαστοι κατ' ἐκείνων ἐγένοντο τὸν χρόνον ἐξ ἀνθρώπων καὶ οὔτε τοὺς οἰκοῦντας οὔτε τὴν πόλιν οὔτε τὸν τῶν οἰκήσεων θεμέλιον ἐξαίφνης οὐδεὶς εὐρεῖν ἐδύνατο·

ὑβριν γὰρ ἀτάσθαλον οὐκ ἐθέλεσκον

ἀλλήλων ἴσχειν, οὐδ' ἀθανάτους θεραπεύειν

ἤθελον, οὐδ' ἔρδειν μακάρων ἱεροῖς ἐπὶ βωμοῖς,

ἢ θέμις ἀθανάτοις.

τοιγὰρ οὖν αὐτοὺς

Ζεὺς Κρονίδης ἔκρυψε χολούμενος, οὐνεκα τιμὰς

οὐκ ἐδίδουν μακάρεσσιν

οὐδ' ἀπῆρχοντο τούτοις, καθάπερ ἦν δίκαιον. Βασσάρων δὲ δὴ τῶν τὸ πάλαι τὰς Ταύρων θυσίας οὐ μόνον ζηλωσάντων, ἀλλὰ καὶ τῇ τῶν ἀνθρωποθυσιῶν βακχεία βορὰν τούτων προσθεμένων (καθάπερ ἡμεῖς νῦν ἐπὶ τῶν ζώων· ἀπαρξάμενοι γὰρ τὰ λοιπὰ δαῖτα τιθέμεθα), τίς οὐκ ἀκήκοεν, ὅτι μετὰ μανίας προσπίπτοντές τε καὶ δάκνοντες ἀλλήλους, ἔτι δὲ πρὸς ἀλήθειαν αἰμοδοιτοῦντες οὐκ ἐπαύσαντο πρὶν τὸ γένος ἐξαναλῶσαι τῶν πρώτων παρ' αὐτοῖς τῆς τοιαύτης ἀψαμένων θυσίας.

[4] (Porph., ibid. II 99,8) ὕστερα μὲν τοίνυν καὶ νεωτάτη ἡ διὰ τῶν ζώων θυσία, τὴν δὲ αἰτίαν λαβοῦσα οὐκ εὐχάριστον ὥς ἡ ἐκ τῶν καρπῶν, ἀλλὰ λιμοῦ ἢ τινος ἄλλης δυστυχίας περίστασιν. αὐτίκα τῶν κατὰ μέρος παρ' Ἀθηναίοις ἀναιρέσεων αἱ πλεῖσται ἢ ἀγνοίας ἢ ὀργὰς ἢ φόβους τὰς ἀρχὰς ἔχουσιν. τὴν μὲν γὰρ τῶν συῶν σφαγὴν ἀκουσίῳ ἁμαρτίᾳ Κλυμένης προσάπτουσιν, ἀπροαιρέτως μὲν βαλοῦσης, ἀνελεύσεως δὲ τὸ ζῷον. διὸ καὶ εὐλαβηθέντα αὐτῆς τὸν ἄνδρα, ὥς παράνομον διαπεπραγμένης, Πυθῶδε ἀφικόμενον χρῆσασθαι τῷ τοῦ θεοῦ μαντεῖῳ. τοῦ δὲ θεοῦ τῷ συμβάντι ἐπιτρέψαντος, ἀδιάφορον λοιπὸν νομίσαι τὸ γιγνόμενον.

[5] (Porph., ibid. II 10,15 f.) Αἶγα δ' ἐν Ἰκαρίῳ τῆς Ἀττικῆς ἐχειρώσαντο πρῶτον, ὅτι ἄμπελον ἀπέθριπεν.

[6] (Porph., ibid. II 10,2111,21) Καὶ παρὰ μὲν Ἀθηναίοις τοιαῦται κατὰ μέρος ἀποδίδονται αἰτίαι, ἄλλαι δὲ παρ' ἄλλοις λέγονται· πλήρεις δὲ πᾶσαι οὐκ εὐαγῶν ἀπολογιῶν. λιμὸν δὲ οἱ πλεῖστοι αἰτιῶνται καὶ τὴν ἐκ τούτου ἀδικίαν. διὸ γευσάμενοι τῶν ἐμψύχων ἀπῆρξαντο καὶ τούτων, εἰωθότες τῆς τροφῆς ἀπάρχεσθαι. ὅθεν οὐδὲ πρεσβύτερον τὸ θυσιῶν ὑπάρχον τῆς ἀναγκαίας τροφῆς ἐκ τούτου ἀφορίζει ἂν τοῖς ἀνθρώποις τὸ βρωτέον, ἐπόμενον δὲ οἷς ἐγεύσαντο καὶ ἀπῆρξαντο, οὐκ ἀναγκάζει ἂν προσίεσθαι ὥς εὐσεβές, οὐ μὴ εὐσεβῶς τοῖς θεοῖς ἀπῆρξαντο. μηνύει δὲ οὐχ ἥκιστα ἐξ ἀδικίας πᾶν τὸ τοιοῦτο λαβεῖν τὴν ἀρχὴν τὸ μὴ ἐν παντὶ ἔθνει τὰ αὐτὰ ἢ θύειν ἢ ἐσθίειν, ἐκ δὲ τῆς χρείας τῆς πρὸς αὐτοὺς στοχάζεσθαι τοῦ καθήκοντος. παρὰ γοῦν Αἰγυπτίοις καὶ Φοίνιξι θάπτον ἂν τις ἀνθρωπείων κρεῶν γεύσαιτο ἢ θηλείας βοός. αἴτιον δὲ ὅτι χρήσιμον τὸ ζῷον ὃν τοῦτο ἐσπάνιζεν παρ' αὐτοῖς. διὸ ταύρων μὲν καὶ ἐγεύσαντο καὶ ἀπῆρξαντο, τῶν δὲ θηλειῶν φειδόμενοι τῆς γονῆς ἔνεκα, ἐν μύσει τὸ ἄψασθαι ἐνομοθέτησαν· καίτοι γ' ἐκ τῆς χρείας ἐφ' ἐνός καὶ ταῦτοῦ γένους τό τε εὐσεβές καὶ τὸ ἀσεβές διώρισαν.

[7] (Porph., *ibid.* II 1215; Bernays, *Exz.* 3) πρῶτον μὲν ὅτι ἐξ ἀνάγκης μεϊζονος, ὥς ἔφαμεν, ἡμᾶς καταλαβούσης κατήρξαντο αὐτῶν· λιμοὶ γὰρ αἵτιοι καὶ πόλεμοι, οἳ καὶ τοῦ γεύσασθαι ἀνάγκην ἐπήγαγον. ὄντων οὖν τῶν καρπῶν, τίς χρεῖα τῷ τῆς ἀνάγκης χρῆσθαι θύματι; ἔπειτα τῶν εὐεργεσιῶν τὰς ἀμοιβὰς καὶ τὰς χάριτας ἄλλοις μὲν ἄλλας ἀποδοτέον κατὰ τὴν ἀξίαν τῆς εὐποιίας, τοῖς δὲ εἰς τὰ μέγιστα ἡμᾶς εὖ πεποιηκόσιν τὰς μεγίστας καὶ ἀπὸ τῶν τιμιωτάτων, καὶ μάλιστα εἰ αὐτοὶ εἶεν τούτων πάροχοι. κάλλιστα δὲ καὶ τιμιώτατα, ὧν ἡμᾶς οἱ θεοὶ εὖ ποιοῦσιν, οἱ καρποί· διὰ γὰρ τούτων ἡμᾶς σφάζουσιν καὶ νομίμως ζῆν παρέχουσιν· ὥστε ἀπὸ τούτων αὐτοὺς τιμητέον. καὶ μὴν θύειν δεῖ ἐκεῖνα, ἃ θύοντες οὐδένα πημανοῦμεν· οὐθὲν γὰρ ὥς τὸ θῦμα ἀβλαβὲς εἶναι χρὴ πᾶσιν. εἰ δὲ λέγοι τις, ὅτι οὐχ ἦττον τῶν καρπῶν καὶ τὰ ζῶα ἡμῖν εἰς χρῆσιν ὁ θεὸς δέδωκεν, ἀλλ' οὖν γε ἐπιθυομένων τῶν ζῶων φέρει τινὰ βλάβην αὐτοῖς, ἅτε τῆς ψυχῆς νοσφιζομένων. οὐ θυτέον οὖν ταῦτα· ἢ γὰρ θυσία ὅσῃα τίς ἐστί κατὰ τοῦνομα. ὅσιος δὲ οὐδεὶς, ὃς ἐκ τῶν ἀλλοτριῶν ἀποδίδωσι χάριτας, κἂν καρποὺς λάβῃ κἂν φυτὰ μὴ ἐθέλοντος. πῶς γὰρ ὅσιον ἀδικουμένων τῶν ἀφαιρεθέντων; εἰ δὲ οὐδὲ καρποὺς ὁ ἀφελόμενος ἄλλων ὁσίως θύει, τὰ γε τούτων τιμιώτερα παντελῶς οὐχ ὅσιον ἀφαιρουμένους τινῶν θύειν· τὸ γὰρ δεινὸν οὕτω γίνεταί μεῖζον· ἢ ψυχὴ δὲ πολλῷ τιμιώτερον τῶν ἐκ γῆς φυομένων, ἣν ἀφαιρεῖσθαι θύοντα τὰ ζῶα οὐ προσήκεν. ἀλλ' ἴσως τις ἂν εἴποι, ὅτι καὶ τῶν φυτῶν ἀφαιρουμένον τι. ἀλλ' οὐχ ὁμοία ἡ ἀφαίρεσις· οὐ γὰρ παρὰ ἀκόντων. καὶ γὰρ ἡμῶν ἐασάντων αὐτὰ μεθήσει τοὺς καρπούς, καὶ ἢ τῶν καρπῶν λῆψις οὐ μετ' ἀπωλείας αὐτῶν, καθάπερ ὅταν τὰ ζῶα τὴν ψυχὴν πρόηται. καὶ τὴν παρὰ τῶν μελιττῶν δὲ τοῦ καρποῦ παράληψιν ἐκ τῶν πόνων ἡμῶν γιγνομένην κοινὴν ἔχειν προσήκει καὶ τὴν ὄνησιν. συνάγουσι γὰρ αἱ μέλιτται ἐκ τῶν φυτῶν τὸ μέλι, ἡμεῖς δὲ αὐτῶν ἐπιμελούμεθα. διὸ καὶ δεῖ οὕτω μερίζεσθαι, ὥς μηδεμίαν αὐταῖς γίνεσθαι βλάβην. τὸ δ' ἄχρηστον μὲν ἐκεῖναις, ἡμῖν δὲ χρήσιμον εἶη ἂν μισθὸς ὁ παρ' ἐκείνων. ἀφεκτέον ἄρα τῶν ζῶων ἐν ταῖς θυσίαις. καὶ γὰρ ἄλλως πάντα μὲν τῶν θεῶν ἐστίν, ἡμῶν δὲ δοκοῦσιν εἶναι οἱ καρποί· ἡμεῖς γὰρ καὶ σπείρομεν αὐτοὺς καὶ φυτεύομεν καὶ ταῖς ἄλλαις ἐπιμελείαις ἀνατρέφομεν. θυτέον οὖν ἐκ τῶν ἡμετέρων, οὐ τῶν ἀλλοτριῶν· ἐπεὶ καὶ τὸ εὐδάπανον καὶ εὐπόριστον τοῦ δυσπορίστου ὁσιώτερον καὶ θεοῖς κεχαρισμένον καὶ τὸ ῥᾶστον τοῖς θύουσιν πρὸς συνεχῇ εὐσέβειαν ἔτοιμον. τὸ τοίνυν μήθ' ὅσιον μήτ' εὐδάπανον οὐ πάνυ θυτέον, εἰ καὶ παρείη. ὅτι δ' οὐ τῶν εὐπορίστων καὶ εὐδαπάνων τὰ ζῶα, θεωρητέον εἰς τὸ πολὺ τοῦ γένους ἡμῶν ὀρῶντας. οὐ γάρ, εἴ τινές εἰσι 'πολύρρηγες καὶ

πολυβούται· τῶν ἀνθρώπων, τοῦτο σκεπτόεν· πρῶτον μὲν ὅτι πολλὰ τῶν ἐθνῶν οὐ κέκτηται τῶν θυσίμων ζώων οὐθέν, εἰ μὴ τις τῶν ἀτίμων λέγοι· δεύτερον δὲ ὅτι τῶν ἐν αὐταῖς ταῖς πόλεσιν οἰκούντων οἱ πλεῖστοι σπανίζουσι τούτων. εἰ δὲ καὶ τῶν ἡμέρων τις καρπῶν λέγοι σπανίζειν, ἀλλ’ οὐ τῶν γε λοιπῶν τῶν ἐκ γῆς φυομένων, οὐδ’ οὕτω χαλεπὸν τοὺς καρποὺς ὥς τὰ ζῶα πορίσασθαι. ῥάων ἄρ’ ὁ πόρος τῶν καρπῶν καὶ τῶν ἀπὸ γῆς ἢ ὁ τῶν ζώων. τὸ δὲ εὐδάπανον καὶ εὐπόριστον πρὸς συνεχρὶ εὐσέβειαν συντελεῖ καὶ πρὸς τὴν ἀπάντων. καὶ μαρτυρεῖ γε ἡ πείρα, ὅτι χαίρουσιν τούτῳ οἱ θεοὶ ἢ τῷ πολυδαπάνῳ. οὐ γὰρ ἂν ποτε τοῦ Θετταλοῦ ἐκείνου <τοῦ> τοὺς χρυσόκερος βοῦς καὶ τὰς ἐκατόμβας τῷ Πυθίῳ προσάγοντος μᾶλλον ἔφησεν ἢ Πυθία τὸν Ἑρμιονέα κεχαρίσθαι θύσαντα τῶν ψαιστῶν ἐκ τοῦ πηριδίου τοῖς τρισὶ δακτύλοις. προσεπιβαλόντι δὲ διὰ τὸ ῥηθὲν τὰ λοιπὰ πάντα τῆς πῆρας ἐπὶ τὸν βωμόν, εἶπε πάλιν, ὅτι δις τόσον ἀπέχθοιτο τοῦτο δράσας ἢ πρότερον ἦν κεχαρισμένος. οὕτω τὸ εὐδάπανον φίλον θεοῖς, καὶ μᾶλλον τὸ δαιμόνιον πρὸς τὸ τῶν θυόντων ἦθος ἢ πρὸς τὸ τῶν θυομένων πλῆθος βλέπει.

[8] (Porph. II 5961,6) ἐπεὶ καὶ Ἀπόλλων παραινῶν θύειν κατὰ τὰ πάτρια, ἐπανάγειν ἔοικεν εἰς τὸ παλαιὸν ἔθος. τὸ δὲ παλαιὸν διὰ ποπάνων καὶ τῶν καρπῶν ἦν. ὅθεν καὶ θυσίαι καὶ θυηλαὶ καὶ θυμέλαι ἐκαλοῦντο, καὶ αὐτὸ τὸ θύειν τοῦ θυμῶν εἶχετο καὶ τοῦ νῦν παρ’ ἡμῖν λεγομένου ἐπιθύειν. ὁ γὰρ ἡμεῖς νῦν θύειν λέγομεν, ἔρδειν ἔλεγον·

ἔρδον δ’ Ἀπόλλωνι τεληέσσας ἐκατόμβας

ταύρων ἢδ’ αἰγῶν.

ἀγνοοῦσιν δὲ οἱ τὴν πολυτέλειαν εἰσαγαγόντες εἰς τὰς θυσίας, ὅπως ἅμα ταύτῃ ἐσμὸν κακῶν εἰσήγαγον, δεισιδαιμονίαν, τρυφήν, ὑπόληψιν τοῦ δεκάζειν δύνασθαι τὸ θεῖον καὶ θυσίαις ἀκείσθαι τὴν ἀδικίαν. ἢ πόθεν οἱ μὲν τριττῷ χρυσόκερος, οἱ δ’ ἐκατόμβας, Ὀλυμπιάς δ’ ἡ Ἀλεξάνδρου μήτηρ πάντα χίλια ἔθυσεν, ἅπαξ τῆς πολυτελείας ἐπὶ τὴν δεισιδαιμονίαν προαγαγούσης; ὅταν δὲ νέος θεοὺς χαίρειν πολυτελείαις γυνῶ καὶ, ὥς φασίν, ταῖς τῶν βοῶν καὶ τῶν ἄλλων ζώων θοίναις, πότ’ ἂν ἐκὼν σωφρονήσειεν; πῶς δὲ κεχαρισμένα θύειν ἡγούμενος τοῖς θεοῖς ταῦτα, οὐκ ἐξεῖναι ἀδικεῖν οἰήσεται αὐτῷ μέλλοντι διὰ τῶν θυσιῶν ἐξωνεῖσθαι τὴν ἁμαρτίαν; πεισθεῖς δὲ ὅτι τούτων χρεῖαν οὐκ ἔχουσιν οἱ θεοί, εἰς δὲ τὸ ἦθος ἀποβλέπουσι τῶν προσιόντων, μεγίστην θυσίαν λαμβάνοντες τὴν ὀρθὴν περὶ αὐτῶν τε καὶ τῶν πραγμάτων διάληψιν, πῶς οὐ σώφρων καὶ ὁσιος καὶ δίκαιος ἔσται; θεοῖς δὲ ἀρίστη μὲν ἀπαρχὴ νοῦς καθαρὸς καὶ ψυχὴ ἀπαθής, οἰκεῖον δὲ καὶ τὸ μετρίων

μὲν ἀπάρχεσθαι τῶν ἄλλων, μὴ παρέργως δέ, ἀλλὰ σὺν πάσῃ προθυμίᾳ. εἰκοῖναι γὰρ δεῖ τὰς τιμὰς ταῖς ἐπὶ τῶν ἀγαθῶν προεδρίαις, ὑπαναστάσεσιν τε καὶ κατακλίσεσιν, οὐ συντάξεων δόσεις.

[9] (Porph., *ibid.* II 19,620,3; Bernays, Exz. 3) δεῖ τοίνυν καθηραμένους τὸ ἦθος ἰέναι θύσοντας τοῖς θεοῖς θεοφιλεῖς ταύτας τὰς θυσίας προσάγοντας, ἀλλὰ μὴ πολυτελεῖς. νῦν δὲ ἐσθῆτα μὲν λαμπρὰν περὶ σῶμα μὴ καθαρὸν ἀμφιεσαμένοις οὐκ ἄρκεῖν νομίζουσιν πρὸς τὸ τῶν θυσιῶν ἄγνόν. ὅταν δὲ τὸ σῶμα μετὰ τῆς ἐσθῆτός τινες λαμπρυνάμενοι μὴ καθαρὰν κακῶν τὴν ψυχὴν ἔχοντες ἴωσιν πρὸς τὰς θυσίας, οὐδὲν διαφέρειν νομίζουσιν, ὥσπερ οὐ τῷ θειοτάτῳ γε τῶν ἐν ἡμῖν χαίροντα μάλιστα τὸν θεὸν διακειμένῳ καθαρῶς, ἅτε συγγενεῖ πεφυκότι. ἐν γοῦν Ἐπιδαύρῳ προεγέγραπτο·

ἄγνὸν χρὴ ναοῖο θυώδεος ἐντὸς ἰόντα

ἔμμεναι·

ἀγνεία δ' ἐστὶ φρονεῖν ὅσια. ὅτι δὲ οὐ τῷ εὐλόγῳ χαίρει ὁ θεὸς τῶν θυσιῶν, ἀλλὰ τῷ τυχόντι, δῆλον ἐκ τοῦ τῆς καθ' ἡμέραν τροφῆς, καὶ ὅποια τις οὖν αὕτη παρατεθῇ, ταύτης πρὸ τῶν ἀπολαύσεων πάντας ἀπάρχεσθαι μικρὸν μὲν, ἀλλὰ τῷ μικρῷ τούτῳ παντὸς μᾶλλον μεγάλη τίς ἐστὶ τιμή.

[10] (Stob. *Florileg.* 3, 50. Von Bernays in einer Fußnote, p. 74, zitiert) χρὴ τοίνυν τὸν μέλλοντα θαυμασθήσεσθαι περὶ τὸ θεῖον φιλοθύτην εἶναι μὴ τῷ πολλὰ θύειν ἀλλὰ τῷ πυκνὰ τιμᾶν τὸ θεῖον. τὸ μὲν γὰρ εὐπορίας, τὸ δ' ὀσιότητος σημεῖον.

Der Inhalt des ausgefallenen Teiles von Porph., *de abstin.* II 20 (διὰ πολλῶν δὲ ὁ Θεόφραστος <ἐκ> τῶν παρ' ἐκάστοις πατριῶν ἐπιδείξας, ὅτι τὸ παλαιὸν τῶν θυσιῶν διὰ τῶν καρπῶν ἦν τῶν ἐπετεῖων πρότερον τῆς πόας λαμβανομένης, καὶ τὰ τῶν σπονδῶν ἐξηγεῖται τοῦτον τὸν τρόπον, worauf Fragment 12 folgt) kurz angedeutet. In diesem Teil dürfte das Fragment 11 zu lesen gewesen sein.

[11] (Porph., *de abstin.* II 51,1018) Φαίη γὰρ ἂν τις, ὅτι πολὺ μέρος ἀναιροῦμεν μαντείας τῆς διὰ σπλάγχνων ἀπεχόμενοι τῆς τῶν ζώων ἀναιρέσεως. οὐκοῦν ὁ τοιοῦτος ἀναιρεῖται καὶ τοὺς ἀνθρώπους. ἐπιφαίνεται γὰρ μᾶλλον, ὥς φασίν, τοῖς τούτων σπλάγχνοις τὰ μέλλοντα· καὶ πολλοὶ γε τῶν βαρβάρων δι' ἀνθρώπου σπλαγχνεύονται. ἀλλ' ὥσπερ ἀδικίας καὶ πλεονεξίας ἦν τὸ μαντείας ἔνεκα ἀναιρεῖν τὸν ὁμόφυλον, οὕτω καὶ τὸ ἄλογον ζῶον σφάττειν μαντείας ἔνεκα ἄδικον.

[12] (Porph., *ibid.* II 20,925,4 p. 155 Nauck², Bernays, Exz. 4) Τὰ μὲν

ἀρχαῖα τῶν ἱερῶν νηφάλια παρὰ πολλοῖς ἦν, νηφάλια δ' ἐστὶν τὰ ὑδρόσπονδα, τὰ δὲ μετὰ ταῦτα μελίσπονδα· τοῦτον γὰρ ἔτοιμον παρὰ μελιττῶν πρῶτον ἐλάβομεν τὸν ὑγρὸν καρπὸν· εἴτ' ἐλαιόσπονδα· τέλος δ' ἐπὶ πᾶσιν τὰ ὕστερον γεγονότα οἰνόσπονδα. μαρτυρεῖται δὲ ταῦτα οὐ μόνον ὑπὸ τῶν κύρβεων, αἱ τῶν Κρήτηθὲν εἰσι Κορυβαντικῶν ἱερῶν οἷον ἀντίγραφα ἅττα πρὸς ἀλήθειαν, ἀλλὰ καὶ παρ' Ἑμπεδοκλέους, ὃς περὶ τε τῶν θυμάτων καὶ περὶ τῆς θεογονίας διεξιὼν παρεμφαίνει λέγων·

οὐδὲ τις ἦν κείνοισιν Ἄρης θεὸς οὐδὲ Κυδοιμὸς
οὐδὲ Ζεὺς βασιλεὺς οὐδὲ Κρόνος οὐδὲ Ποσειδῶν,
ἀλλὰ Κύπρις βασίλεια, ἣ ἐστὶν ἡ φιλία·
τὴν οἱ γ' εὐσεβέεσσιν ἀγάλμασιν ἱλάσκοντο
γραπτοῖς τε ζῳοῖσι μύροισι τε δαιδαλεόδομοις
σμύρνης τ' ἀκράτου θυσίαις λιβάνου τε θυώδους
ξουθῶν τε σπονδὰς μελίτων ῥιπτοῦντες ἐς οὐδ' αὖ,
ἅπερ καὶ νῦν ἐτι σφίζεται παρ' ἐνίοις οἷον ἵχνη τινὰ τῆς ἀληθείας ὄντα,
ταύρων δ' ἀκράτοισι φόνοις οὐ δεύετο βωμός.

τῆς γὰρ οἶμαι φιλίας καὶ τῆς περὶ τὸ συγγενὲς αἰσθήσεως πάντα κατεχούσης, οὐδεὶς οὐθὲν ἐφόνευεν, οἰκεῖα εἶναι νομίζων τὰ λοιπὰ τῶν ζώων. ἐπεὶ δὲ Ἄρης καὶ Κυδοιμὸς καὶ πᾶσα μάχη καὶ πολέμων ἀρχὴ κατέσχευεν, τότε πρῶτον οὐθεὶς οὐθενὸς ὄντως ἐφείδετο τῶν οἰκείων. σκεπτόν δ' ἐτι καὶ ταῦτα· ὥσπερ γὰρ οἰκειότητος οὔσης ἡμῖν πρὸς τοὺς ἀνθρώπους, τοὺς κακοποιούς καὶ καθάπερ ὑπὸ τινος πνοῆς τῆς ἰδίας φύσεως καὶ μοχθηρίας φερομένους πρὸς τὸ βλάπτειν τὸν ἐντυγχάνοντα ἀναιρεῖν ἡγούμεθα δεῖν καὶ κολάζειν ἅπαντας, οὕτως καὶ τῶν ἀλόγων ζώων τὰ ἄδικοι τὴν φύσιν καὶ κακοποιὰ πρὸς τε τὸ βλάπτειν ὠρμημένα τῇ φύσει τοὺς ἐμπελάζοντας ἀναιρεῖν ἴσως προσήκει, τὰ δὲ μὴθὲν ἀδικοῦντα τῶν λοιπῶν ζώων μὴδὲ τῇ φύσει πρὸς τὸ βλάπτειν ὠρμημένα ἀναιρεῖν τε καὶ φονεύειν ἄδικον δήπου, ὥσπερ καὶ τῶν ἀνθρώπων τοὺς τοιούτους. ὁ δὲ καὶ ἐμφαίνειν ἔοικεν ἐν δίκαιον ἡμῖν μὴδὲν εἶναι πρὸς τὰ λοιπὰ τῶν ζώων, διὰ τὸ βλαβερὰ ἅττα τούτων εἶναι καὶ κακοποιὰ τὴν φύσιν, τὰ δὲ μὴ τοιαῦτα, καθάπερ καὶ τῶν ἀνθρώπων. ἄρ' οὖν θυτέον τὰ ἄξια τοῦ σφάττεσθαι τοῖς θεοῖς; καὶ πῶς, εἴ γε φαῦλα τὴν φύσιν ἐστίν; οὐθὲν γὰρ μᾶλλον οὕτω ἢ τὰ ἀνάπηρα θυτέον. κακῶν δὲ οὕτως ἀπαρχὴν καὶ οὐ τιμῆς ἔνεκα τὰς θυσίας ποιήσομεν. εἰ δ' ἄρα θυτέον τοῖς θεοῖς ζῶα, τὰ μὴθὲν ἀδικοῦντα τούτων ἡμᾶς θυτέον. οὐκ ἀναιρετέον δὲ ὁμολογηκότες μὴθὲν ἡμᾶς ἀδικοῦντα τῶν λοιπῶν ζώων, ὥστε οὐδὲ θυτέον

αὐτὰ τοῖς θεοῖς. εἰ οὖν οὔτε ταῦτα θυτέον οὔτε τὰ κακοποιά, πῶς οὐ φανερόν, ὅτι παντὸς μᾶλλον ἀφεκτέον καὶ οὐ θυτέον ἐστὶ τῶν λοιπῶν ζώων οὐδέν, ἀναιρεῖν γε μέντοι τούτων ἕτερ' ἅττα προσήκει; καὶ γὰρ ἄλλως τριῶν ἕνεκα θυτέον τοῖς θεοῖς· ἢ γὰρ διὰ τιμὴν ἢ διὰ χάριν ἢ διὰ χρεῖαν τῶν ἀγαθῶν. καθάπερ γὰρ τοῖς ἀγαθοῖς ἀνδράσιν, οὕτω καὶ κεῖνοις ἡγοούμεθα δεῖν ποιεῖσθαι τὰς ἀπαρχάς. τιμῶμεν δὲ τοὺς θεοὺς ἢ κακῶν μὲν ἀποτροπὴν, ἀγαθῶν δὲ παρασκευὴν ἡμῖν γενέσθαι ζητοῦντες, ἢ προπεπονθότες εὖ, οὐχ ἵνα τύχωμεν ὠφελείας τινός, ἢ κατὰ ψιλὴν τὴν τῆς ἀγαθῆς αὐτῶν ἕξωος ἐκτίμησιν. ὥστε καὶ τῶν ζώων, εἰ ἀπαρκτέον αὐτὰ θεοῖς, τούτων τινὸς ἕνεκα θυτέον. καὶ γὰρ ἃ θύομεν, τούτων τινὸς ἕνεκα θύομεν. ἄρ' οὖν τιμῆς ἡγήσασιτ' ἂν τις τυγχάνειν ἡμῶν ἢ θεός, ὅταν ἀδικοῦντες εὐθὺς διὰ τῆς ἀπαρχῆς φαινώμεθα, ἢ μᾶλλον ἀτιμίαν οἰήσασιτ' ἂν τὸ τοιοῦτο δρᾶν; ἐν τῷ δὲ γε θύειν ἀναιροῦντες τὰ μηδὲν ἀδικοῦντα τῶν ζώων, ἀδικήσιν ὁμολογοῦμεν· ὥστε τιμῆς μὲν ἕνεκα οὐ θυτέον τῶν λοιπῶν ζώων οὐθέν· οὐ μὴν οὐδὲ τῶν εὐεργεσιῶν χάριν αὐτοῖς ἀποδιδόντας. ὁ γὰρ τὴν δικαίαν ἀμοιβὴν τῆς εὐεργεσίας καὶ τῆς εὐποΐας τὸ ἀντάξιον ἀποδιδούς οὐκ ἐκ τοῦ κακῶς τινὰς δρᾶν ὀφείλει ταῦτα παρέχειν· οὐδὲν γὰρ μᾶλλον ἀμείβεσθαι δόξει ἢ κἂν εἰ τὰ τοῦ πέλας ἀρπάσας τις στεφανοίῃ τινὰς ὡς χάριν ἀποδιδούς καὶ τιμὴν. ἀλλ' οὐδὲ χρεῖας τινὸς ἕνεκα τῶν ἀγαθῶν. ὁ γὰρ ἀδίκῳ πράξει τὸ παθεῖν εὖ θηρεύων ὑποπτὸς ἐστὶ μηδὲ εὖ παθὼν χάριν ἕξειν· ὥστ' οὐδ' ἐλπίζομένης εὐεργεσίας θυτέον ἐστὶ τοῖς θεοῖς ζῶα. καὶ γὰρ δὴ τῶν μὲν ἀνθρώπων λάθοι τις ἂν ἴσως τινὰ τοῦτο πράττων, τὸν δὲ θεὸν ἀμήχανον καὶ λαθεῖν. εἰ τοίνυν θυτέον μὲν τούτων τινὸς ἕνεκα, οὐδενὸς δὲ τούτων χάριν αὐτὸ πρακτέον, δῆλον ὡς οὐ θυτέον ἐστὶν ζῶα τὸ παράπαν τοῖς θεοῖς. ταῖς γὰρ ἐκ τῶν θυμάτων ἀπολαύσει τὸ περὶ τούτων ἀληθὲς ἐξαλείφειν πειρώμενοι λανθάνομεν ἡμᾶς αὐτούς, οὐ γὰρ δὴ τὸν θεόν. τῶν μὲν οὖν ἀτίμων ζώων, ἃ μηδεμίαν εἰς τὸν βίον ἡμῖν παρέχεται χρεῖαν κρείττω, οὐδεμίαν ἀπόλαυσιν ἐχόντων οὐθέν θύομεν τοῖς θεοῖς. τίς γὰρ δὴ πώποτε ἔθυσεν ὄφεις καὶ σκορπίους ἢ πιθήκους ἢ τι τῶν τοιούτων ζώων; τῶν δὲ τοῖς βίοις ἡμῶν χρεῖαν τινὰ παρεχομένων καὶ τι εἰς ἀπόλαυσιν ἐν αὐτοῖς ἐχόντων οὐθενὸς ἀπεχόμεθα, σφάττοντες ὡς ἀληθῶς καὶ δέροντες ἐπὶ προστασίας τοῦ θείου. βοῦς γὰρ καὶ πρόβατα πρὸς τε τούτοις ἐλάφους καὶ ὄρνιθας, αὐτούς τε τοὺς καθαριότητος μὲν οὐθὲν κοινωνοῦντας, ἀπόλαυσιν δὲ ἡμῖν παρέχοντας σιάλους σφάττομεν τοῖς θεοῖς· ὣν τὰ μὲν τοῖς βίοις ἡμῶν ἐπικουρεῖ συμπονοῦντα, τὰ δὲ εἰς τροφήν ἢ τινὰς ἄλλας χρεῖας ἔχει βοήθειαν. τὰ δὲ οὐθὲν τούτων δρῶντα διὰ τὴν ἐξ αὐτῶν ἀπόλαυσιν ὁμοίως τοῖς ἔχουσι

τὸ χρήσιμον ὑπὸ τῶν ἀνθρώπων ἀπόλλυται ταῖς θυσίαις. ἀλλ' οὐκ ὄνους οὐδ' ἐλέφαντας οὐδὲ ἄλλο τῶν συμπονούτων μὲν, οὐκ ἐχόντων δὲ ἀπόλαυσιν θύομεν. καίτοι καὶ χωρὶς γε τοῦ θύειν οὐκ ἀπεχόμεθα τῶν τοιούτων, σφάττοντες διὰ τὰς ἀπολαύσεις, καὶ θύομεν αὐτῶν τῶν θυσίμων οὐ τὰ τοῖς θεοῖς, πολὺ δὲ μᾶλλον τὰ ταῖς τῶν ἀνθρώπων ἐπιθυμίαις κεχαρισμένα, καταμαρτυροῦντες ἡμῶν αὐτῶν, ὅτι τῆς ἀπολαύσεως χάριν ἐμμένομεν τοῖς τοιούτοις θύμασιν.

[13] (Porph., *ibid.* II 26-28,4; Bernays, *Exz.* 4) καίτοι Σύρων, ὧν μὲν Ἰουδαῖοι, διὰ τὴν ἐξ ἀρχῆς θυσίαν ἔτι καὶ νῦν ζωοθυτούντων εἰ τὸν αὐτὸν ἡμᾶς τρόπον τις κελεύει θύειν, ἀποσταίημεν ἂν τῆς πράξεως. οὐ γὰρ ἐστιώμενοι τῶν τυθέντων, ὀλοκαυτοῦντες δὲ ταῦτα νυκτὸς καὶ κατ' αὐτῶν πολὺ μέλι καὶ οἶνον λείβοντες ἀναλίσκουσι τὴν θυσίαν θάττον, ἵνα τοῦ δεινοῦ μηδ' ὁ πανόπτης γένοιτο θεατῆς. καὶ τοῦτο δρῶσιν νηστεύοντες τὰς ἀνὰ μέσον τούτων ἡμέρας· κατὰ δὲ πάντα τοῦτον τὸν χρόνον, ἅτε φιλόσοφοι τὸ γένος ὄντες, περὶ τοῦ θείου μὲν ἀλλήλοις λαλοῦσι, τῆς δὲ νυκτὸς τῶν ἄστρον ποιοῦνται τὴν θεωρίαν, βλέποντες εἰς αὐτὰ καὶ διὰ τῶν εὐχῶν θεοκλυτοῦντες. κατήρξαντο γὰρ οὗτοι πρῶτοι τῶν τε λοιπῶν ζῶων καὶ σφῶν αὐτῶν, ἀνάγκη καὶ οὐκ ἐπιθυμία τοῦτο πράξαντες. μάθοι δ' ἂν τις ἐπιβλέψας τοὺς λογιωτάτους πάντων Αἰγυπτίους, οἱ τοσοῦτον ἀπεῖχον τοῦ φονεύειν τι τῶν λοιπῶν ζῶων, ὥστε τὰς τούτων εἰκόνας μιμήματα τῶν θεῶν ἐποιοῦντο. οὕτως οἰκεῖα καὶ συγγενῇ ταῦτα τοῖς θεοῖς ἐνόμιζον εἶναι καὶ τοῖς ἀνθρώποις. ἀπ' ἀρχῆς μὲν γὰρ αἱ τῶν καρπῶν ἐγίνοντο τοῖς θεοῖς θυσίαι· χρόνῳ δὲ τῆς ὀσιότητος ἡμῶν ἐξαμελησάντων, ἐπεὶ καὶ τῶν καρπῶν ἐσπάνισαν καὶ διὰ τὴν τῆς νομίμου τροφῆς ἔνδειαν εἰς τὸ σαρκοφαγεῖν ἀλλήλων ὥρμησαν, τότε μετὰ πολλῶν λιτῶν ἱκετεύοντες τὸ δαιμόνιον σφῶν αὐτῶν ἀπήρξαντο τοῖς θεοῖς πρῶτον, οὐ μόνον ὁ τι κάλλιστον ἐνῆν αὐτοῖς καὶ τοῦτο τοῖς θεοῖς καθοσιοῦντες, ἀλλὰ καὶ πέρα τῶν καλλίστων προσεπιλαμβάνοντες τοῦ γένους· ἂν' οὗ μέχρι τοῦ νῦν οὐκ ἐν Ἀρκαδίᾳ μόνον τοῖς Λυκαίοις οὐδ' ἐν Καρχηδόνι τῷ Κρόνῳ κοινῇ πάντες ἀνθρωποθυτοῦσιν, ἀλλὰ κατὰ περίοδον τῆς τοῦ νομίμου χάριν μνήμης ἐμφύλιον αἷμα ραίνουσι πρὸς τοὺς βωμούς, καίπερ τῆς παρ' αὐτοῖς ὀσίας ἐξειργούσης τῶν ἱερῶν τοῖς περιρραντηρίοις καὶ κηρύγματι, εἴ τις αἵματος ἀνθρωπείου μεταίτιος. ἐντεῦθεν οὖν μεταβαίνοντες ὑπάλλαγμα πρὸς τὰς θυσίας τῶν ἰδίων ἐποιοῦντο σωμάτων τὰ τῶν λοιπῶν ζῶων σώματα, καὶ πάλιν κόρῳ τῆς νομίμου τροφῆς εἰς τὴν περὶ εὐσεβείας λήθην ἰόντες, ἐπιβαίνοντες ἀπληστίας οὐθὲν ἄγευστον οὐδὲ ἄβρωτον

περιλείποντες. ὅπερ καὶ περὶ τὴν ἐκ τῶν καρπῶν τροφήν νῦν συμβαίνει περὶ πάντας. ὅταν γὰρ τῇ προσφορᾷ τὴν ἀναγκαίαν ἔνδειαν κουφίσωνται, ζητοῦντες τοῦ κόρου τὸ περιττόν, ἐκπονοῦσι πρὸς βρῶσιν πολλὰ τῶν σωφροσύνης ἔξω κειμένων. ὅθεν ὡς οὐκ ἄτιμα ποιοῦμενοι τὰ θεοῖς θύματα γεύσασθαι τούτων προήχθησαν καὶ διὰ τὴν ἀρχὴν τῆς πράξεως ταύτης προσθήκη ἡ ζωοφαγία γέγονεν τῇ ἀπὸ τῶν καρπῶν τροφῇ τοῖς ἀνθρώποις. καθάπερ οὖν τὸ παλαιὸν ἀπῆρξαντό τε τοῖς θεοῖς τῶν καρπῶν καὶ τῶν ἀπαρχθέντων ἀσπασίως μετὰ τὴν θυσίαν ἐγεύσαντο, οὕτω τῶν ζώων καταρξάμενοι ταῦτόν ἡγοῦντο δεῖν τοῦτο δρᾶν, καίπερ τὸ ἀρχαῖον οὐχ οὕτως τῆς ὁσίας ταῦτα βραβευσάσης, ἀλλ' ἐκ τῶν καρπῶν ἕκαστον τῶν θεῶν τιμῶντας. τοῖς μὲν γὰρ ἢ τε φύσις καὶ πᾶσα τῶν ἀνθρώπων ἡ τῆς ψυχῆς αἴσθησις δρωμένοις συνηρέσκετο·

ταύρων δ' ἀκράτοισι φόνους οὐ δεύετο βωμός,
ἀλλὰ μύσος τοῦτ' ἔσκεν ἐν ἀνθρώποισι μέγιστον,
θυμὸν ἀπορραΐσαντας ἐέδμεναι ἦια γυῖα.

θεωρῆσαι δὲ ἔστιν ἐκ τοῦ περὶ Δῆλῳ ἔτι νῦν σφωζομένου βωμοῦ, πρὸς ὃν οὐθενὸς προσαγομένου παρ' αὐτοῖς οὐδὲ θυομένου ἐπ' αὐτοῦ ζῶον 'εὐσεβῶν' κέκληται 'βωμός'. οὕτως οὐ μόνον ἀπείχοντο τῶν ζώων θύοντες, ἀλλὰ καὶ τοῖς ἰδρυσταμένοις τοῦτον ὁμοίως καὶ τοῖς χρωμένοις αὐτῷ μετέδωκαν τῆς εὐσεβείας.

[14] (Porph., *ibid.* II 28,11 f.; Bernays, *Exz.* 4) Καὶ γὰρ οὔτε φόνῳ τοὺς τῶν θεῶν βωμοὺς χραίνειν δεῖ[15] (Porph., *ibid.* II 28,12-14) οὔτε ἀπτέον τοῖς ἀνθρώποις τῆς τοιαύτης τροφῆς, ὡς οὐδὲ τῶν ἰδίων σωμάτων, [16] (Porph., *ibid.* II 28,14-29,18, Bernays, *Exz.* 4) ἀλλὰ ποιητέον παράγγελμα τῷ παντὶ βίῳ τὸ ἐν Ἀθήναις ἔτι σφωζόμενον. τὸ γὰρ παλαιόν, ὡς καὶ πρόσθεν ἐλέγομεν, καρποὺς τοῖς θεοῖς τῶν ἀνθρώπων θυόντων, ζῶα δὲ οὐ, οὐδὲ εἰς τὴν ἰδίαν τροφήν καταχρωμένων, λέγεται κοινῆς θυσίας οὔσης Ἀθήνησιν [17] (Porph., *ibid.* II 29,19, p. 158) Δίομον ἢ [18] (Porph., *ibid.* II 29,19-31,24; Bernays, *Exz.* 4) Σώπατρόν τινα, τῷ γένει οὐκ ἐγγώριον, γεωργοῦντα δὲ κατὰ τὴν Ἀττικὴν, ἐπεὶ πελάνου τε καὶ τῶν θυλημάτων ἐπὶ τῆς τραπέζης ἐναργῶς κειμένων, ἵνα τοῖς θεοῖς ταῦτα θύοι, τῶν βοῶν τις εἰσιὼν ἀπ' ἔργου τὰ μὲν κατέφαγεν τὰ δὲ συνεπάτησεν, αὐτὸν δ' ὑπεραγανακτήσαντα τῷ συμβάντι, πελέκεώς τινος πλησίον ἀκονωμένου, τοῦτον ἀρπάζαντα, πατάξαι τὸν βοῦν. τελευτήσαντος δὲ τοῦ βοός, ὡς ἔξω τῆς ὀργῆς καταστάς συνεφρόνησεν οἷον ἔργον ἦν εἰργασμένος, τὸν μὲν βοῦν θάπτει, φυγὴν δὲ ἐκούσιον ἀράμενος ὡς

ἡσεβηκῶς, ἔφυγεν εἰς Κρήτην. αὐχμῶν δὲ κατεχόντων καὶ δεινῆς ἀκαρπίας γενομένης ἐπερωτῶσι κοινῇ τὸν θεὸν ἀνεῖλεν ἡ Πυθία τὸν ἐν Κρήτῃ φυγάδα ταῦτα λύσειν, τὸν τε φονέα τιμωρησαμένων καὶ τὸν τεθνεῶτα ἀναστησάντων ἐν ἧπερ ἀπέθανε θυσία λῶον ἔσσεσθαι γευσασμένοις τε τοῦ τεθνεῶτος καὶ μὴ κατασχοῦσιν. ὅθεν ζητήσεως γενομένης καὶ τοῦ μεταίτιου τῆς πράξεως ἀνευρεθέντος, Σώπατρος νομίσας τῆς περὶ αὐτὸν δυσκολίας ἀπαλλαγῆσεσθαι ὡς ἐναγοῦς ὄντος, εἰ κοινῇ τοῦτο πράξειαν πάντες, ἔφη πρὸς τοὺς αὐτὸν μετελθόντας, δεῖν κατακοπῆναι βοῦν ὑπὸ τῆς πόλεως. ἀπορούντων δέ, τίς ὁ πατάξων ἔσται, παρασχεῖν αὐτοῖς τοῦτο, εἰ πολίτην αὐτὸν ποιησάμενοι κοινωνήσουσι τοῦ φόνου. συγχωρηθέντων οὖν τούτων, ὡς ἐπανῆλθον ἐπὶ τὴν πόλιν, συνέταξαν οὕτω τὴν πρᾶξιν, ἥπερ καὶ νῦν διαμένει παρ' αὐτοῖς. ὕδροφόρους παρθένους κατέλεξαν· αἱ δ' ὕδωρ κομίζουσιν, ὅπως τὸν πέλεκυν καὶ τὴν μάχαιραν ἀκονήσουσιν. ἀκονησάντων δὲ ἐπέδωκεν μὲν τὸν πέλεκυν ἕτερος, ὁ δ' ἐπάταξε τὸν βοῦν, ἄλλος δ' ἔσφαξεν· τῶν δὲ μετὰ ταῦτα δειράντων ἐγεύσαντο τοῦ βοὸς πάντες. τούτων δὲπραχθέντων τὴν μὲν δορὰν τοῦ βοὸς ράψαντες καὶ χόρτῳ ἐπογκώσαντες ἐξανέστησαν, ἔχοντα ταυτόν, ὅπερ καὶ ζῶν ἔσχεν σχῆμα, καὶ προσέζευσαν ἄροτρον ὡς ἐργαζομένῳ. κρίσιν δὲ ποιούμενοι τοῦ φόνου πάντας ἐκάλουν εἰς ἀπολογίαὺς τοὺς τῆς πράξεως κοινωνήσαντας. ὧν δὴ αἱ μὲν ὕδροφόροι τοὺς ἀκονήσαντας αὐτῶν ἡτιῶντο μᾶλλον, οἱ δὲ ἀκονήσαντες τὸν ἐπιδόντα τὸν πέλεκυν, οὗτος δὲ τὸν ἐπισφάζαντα, καὶ ὁ τοῦτο δράσας τὴν μάχαιραν, καθ' ἣς οὔσης ἀφώνου τὸν φόνον κατέγνωσαν. ἀπὸ δ' ἐκείνου μέχρι τοῦ νῦν αἰεὶ τοῖς Διυπολείοις Ἀθήνησιν ἐν ἀκροπόλει οἱ εἰρημένοι τὸν αὐτὸν τρόπον ποιοῦνται τὴν τοῦ βοὸς θυσίαν. θέντες γὰρ ἐπὶ τῆς χαλκῆς τραπέζης πέλανον καὶ ψαιστά, περιελάνουσι τοὺς κατανεμηθέντας βοῦς, ὧν ὁ γευσάμενος κόπτεται. καὶ γένη τῶν ταῦτα δρώντων ἔστιν μέχρι τοῦ νῦν· οἱ μὲν ἀπὸ τοῦ πατάξαντος βουτύποι καλούμενοι πάντες, οἱ δ' ἀπὸ τοῦ περιελάσαντος κεντριάδαι· τοὺς δ' ἀπὸ τοῦ ἐπισφάζαντος δαιτροὺς ὀνομάζουσιν διὰ τὴν ἐκ τῆς κρεανομίας γιγνομένην δαῖτα. πληρώσαντες δὲ τὴν βύρσαν, ὅταν πρὸς τὴν κρίσιν ἀχθῶσιν, καταποντοῦσι τὴν μάχαιραν. οὕτως οὔτε τὸ παλαιὸν ὅσιον ἦν κτείνειν τὰ συνεργὰ τοῖς βίοις ἡμῶν ζῶα, νῦν τε τοῦτο φυλακτέον ἐστὶ πράττειν,

[19] (Porph., *ibid.* II 31,1 p. 162-32,16 Nauck²; Bernays, *Exz.* 4) ἵνα καθάπερ ἄγνὰ θύματα τῷ δαιμονίῳ τῶν ἀνθρώπων ἕκαστος ἀπαρχόμενος τύχη τῆς ὀσίας καὶ τῆς παρὰ θεῶν ὠφελείας. πάντων δὲ μεγίστη καὶ πρώτη ἡ

τῶν καρπῶν ἐστίν, ἥς καὶ ἀπαρκτέον μόνῃς τοῖς θεοῖς καὶ τῇ γῇ τῇ τούτους ἀναδόουσι. κοινὴ γάρ ἐστιν αὕτη καὶ θεῶν καὶ ἀνθρώπων ἐστία, καὶ δεῖ πάντας ἐπὶ ταύτης ὡς τροφοῦ καὶ μητρὸς ἡμῶν κλινομένους ὑμνεῖν καὶ φιλοστοργεῖν ὡς τεκοῦσαν· οὕτως γὰρ τῆς τοῦ βίου καταστροφῆς τυχόντες πάλιν ἀξιωθεῖμεν ἀνιέναι εἰς οὐρανόν, τὸ σύμπαν γένος τῶν ἐν οὐρανῷ θεῶν, οὓς νῦν ὁρῶντας τιμᾶν δεῖ τούτοις, ὧν συναίτιοι ἡμῖν εἰσίν, ἀπαρχομένους μὲν τῶν ὑπαρχόντων καρπῶν καὶ πάντας, οὐκ ἀξιόχρεως δ' εἰς τὸ θύειν θεοῖς πάντας ἡμᾶς ἡγουμένους. καθάπερ γὰρ οὐ πᾶν θυτέον αὐτοῖς, οὕτως οὐδ' ὑπὸ παντὸς ἴσως κεχάρισται τοῖς θεοῖς.

[20]

Περὶ ζώων φρονήσεως καὶ ἡθους (?)

(Porph., *ibid.* III 25,16 p. 220-25,20 p. 221 Nauck²) Τοὺς ἐκ τῶν αὐτῶν γεννηθέντας, λέγω δὲ πατρὸς καὶ μητρός, οἰκείους εἶναι φύσει φαμέν ἀλλήλων· καὶ τοίνυν καὶ τοὺς ἀπὸ τῶν αὐτῶν προπατόρων σπαρέντας οἰκείους ἀλλήλων εἶναι νομίζομεν καὶ μέντοι καὶ τοὺς ἑαυτῶν πολίτας τῷ τῆς τε γῆς καὶ τῆς πρὸς ἀλλήλους ὁμιλίας κοινωνεῖν. οὐ γὰρ ἐκ τῶν αὐτῶν ἔτι τότε τοιοῦτους ἀλλήλοις φύντας οἰκείους αὐτοῖς εἶναι κρίνομεν, εἰ μὴ ἄρα τινὲς τῶν πρώτων αὐτοῖς προγόνων οἱ αὐτοὶ τοῦ γένους ἀρχηγοὶ πεφύκασιν ἢ ἀπὸ τῶν αὐτῶν. οὕτω δέ, οἶμαι, καὶ τὸν Ἑλληνα μὲν τῷ Ἑλληνι, τὸν δὲ βάρβαρον τῷ βαρβάρῳ, πάντας δὲ τοὺς ἀνθρώπους ἀλλήλοις φαμέν οἰκείους τε καὶ συγγενεῖς εἶναι, δυοῖν θάτερον, ἢ τῷ προγόνων εἶναι τῶν αὐτῶν, ἢ τῷ τροφῆς καὶ ἡθῶν καὶ ταύτου γένους κοινωνεῖν. οὕτως δὲ καὶ τοὺς πάντας ἀνθρώπους ἀλλήλοις τίθεμεν καὶ συγγενεῖς καὶ μὴν καὶ πᾶσι τοῖς ζώοις· αἱ γὰρ τῶν σωμάτων ἀρχαὶ πεφύκασιν αἱ αὐταί· λέγω δὲ οὐκ ἐπὶ τὰ στοιχεῖα ἀναφέρων τὰ πρῶτα· ἐκ τούτων μὲν γὰρ καὶ τὰ φυτά· ἄλλ' οἷον δέρμα, σάρκας καὶ τὸ τῶν ὑγρῶν τοῖς ζώοις σύμφυτον γένος. πολὺ δὲ μᾶλλον τῷ τὰς ἐν αὐτοῖς ψυχὰς ἀδιαφόρους πεφυκέναι, λέγω δὴ ταῖς ἐπιθυμίαις καὶ ταῖς ὀργαῖς, ἔτι δὲ τοῖς λογισμοῖς, καὶ μάλιστα πάντων ταῖς αἰσθήσεσιν. ἄλλ' ὥσπερ τὰ σώματα, οὕτω καὶ τὰς ψυχὰς τὰ μὲν ἀπηκριβωμένας ἔχει τῶν ζώων, τὰ δὲ ἥττον τοιαύτας, πᾶσι γε μὴν αὐτοῖς αἱ αὐταὶ πεφύκασιν ἀρχαί. δηλοῖ δὲ ἡ τῶν παθῶν οἰκειότης.

Physicorum opinionones

ΕΚ ΤΩΝ ΘΕΟΦΡΑΣΤΟΥ ΦΥΣΙΚΩΝ ΔΟΞΩΝ

[1] Simplic. in phys. f. 6r 18-31.

Τῶν δὲ μίαν καὶ κινουμένην λεγόντων τὴν ἀρχὴν, οὓς καὶ φυσικοὺς ἰδίως καλεῖ (Aristoteles), οἱ μὲν πεπερασμένην αὐτὴν φασιν, ὥσπερ Θαλῆς μὲν Ἐξαμύου Μιλήσιος καὶ Ἴππων, ὃς δοκεῖ καὶ ἄθεος γεγονέναι, ὕδωρ ἔλεγον τὴν ἀρχὴν ἐκ τῶν φαινομένων κατὰ τὴν αἴσθησιν εἰς τοῦτο προαχθέντες· καὶ γὰρ τὸ θερμὸν τῷ ὑγρῷ ζῆ καὶ τὰ νεκρούμενα ξηραίνεται καὶ τὰ σπέρματα πάντων ὑγρὰ καὶ ἡ τροφή πᾶσα χυλώδης· ἐξ οὗ δὲ ἐστὶν ἕκαστα, τούτῳ καὶ τρέφεσθαι πέφυκε· τὸ δὲ ὕδωρ ἀρχὴ τῆς ὑγρᾶς φύσεως ἐστὶ καὶ συνεκτικὸν πάντων· διὸ πάντων ἀρχὴν ὑπέλαβον εἶναι τὸ ὕδωρ καὶ τὴν γῆν ἐφ' ὕδατος ἀπεφάναντο κεῖσθαι. Θαλῆς δὲ πρῶτος παραδέδοται τὴν περὶ φύσεως ἱστορίαν τοῖς Ἑλλήσιν ἐκφῆναι, πολλῶν μὲν καὶ ἄλλων προγεγονότων, ὥς καὶ Θεοφράστῳ δοκεῖ, αὐτὸς δὲ πολὺ διενεγκὼν ἐκείνων ὥς ἀποκρύψαι πάντα τοὺς πρὸ αὐτοῦ· λέγεται δὲ ἐν γραφαῖς μηδὲν καταλιπεῖν πλὴν τῆς καλουμένης Ναυτικῆς ἀστρολογίας. Ἴππασος δὲ ὁ Μεταποντῖνος καὶ Ἡράκλειτος ὁ Ἐφέσιος ἐν καὶ οὗτοι καὶ κινούμενον καὶ πεπερασμένον, ἀλλὰ πῦρ ἐποίησαν τὴν ἀρχὴν καὶ ἐκ πυρὸς ποιοῦσι τὰ ὄντα πυκνῶσαι καὶ μανῶσαι καὶ διαλύουσι πάλιν εἰς πῦρ ὥς ταύτης μιᾶς οὐσῆς φύσεως τῆς ὑποκειμένης· πυρὸς γὰρ ἀμοιβὴν εἶναι φησιν Ἡράκλειτος πάντα· ποιεῖ δὲ καὶ τάξιν τινὰ καὶ χρόνον ὀρισμένον τῆς τοῦ κόσμου μεταβολῆς κατὰ τινὰ εἰμαρμένην ἀνάγκην.

[2] Simplic. in phys. f. 6r 36-54.

Τῶν δὲ ἐν καὶ κινούμενον καὶ ἄπειρον λεγόντων Ἀναξίμανδρος μὲν Πραξιάδου Μιλήσιος Θαλοῦ γενόμενος διάδοχος καὶ μαθητῆς ἀρχὴν τε καὶ στοιχεῖον εἶρηκε τῶν ὄντων τὸ ἄπειρον, πρῶτος τοῦτο τοῦνομα κομίσας τῆς ἀρχῆς· λέγει δὲ αὐτὴν μήτε ὕδωρ μήτε ἄλλο τι τῶν καλουμένων εἶναι στοιχείων, ἀλλ' ἐτέραν τινὰ φύσιν ἄπειρον, ἐξ ἧς ἅπαντας γίνεσθαι τοὺς οὐρανούς καὶ τοὺς ἐν αὐτοῖς κόσμους· ἐξ ὧν δὲ ἡ γένεσις ἐστὶ τοῖς οὖσι, καὶ τὴν φθορὰν εἰς ταῦτα γίνεσθαι κατὰ τὸ χρεῶν, διδόναι γὰρ αὐτὰ δίκην καὶ τίσιν ἀλλήλοις τῆς ἀδικίας κατὰ τὴν τοῦ χρόνου τάξιν, ποιητικωτέροις οὕτως ὀνόμασιν αὐτὰ λέγων. δῆλον δὲ ὅτι τὴν εἰς ἄλληλα μεταβολὴν τῶν τεσσάρων στοιχείων οὗτος θεασάμενος οὐκ ἠξίωσεν ἐν τι τούτων ὑποκείμενον ποιῆσαι, ἀλλὰ τι ἄλλο παρὰ ταῦτα. οὗτος δὲ οὐκ ἀλλοιουμένου τοῦ στοιχείου τὴν

γένεσιν ποιεῖ, ἀλλ' ἀποκρινομένων τῶν ἐναντίων διὰ τῆς αἰδίου κινήσεως. διὸ καὶ τοῖς περὶ Ἀναξαγόραν τοῦτον ὁ Ἀριστοτέλης συνέταξεν. Ἀναξιμένης δὲ Εὐρυστράτου Μιλήσιος ἐταῖρος γεγωνὸς Ἀναξιμάνδρου μίαν μὲν καὶ αὐτὸς τὴν ὑποκειμένην φύσιν καὶ ἄπειρόν φησιν, ὥσπερ ἐκεῖνος, οὐκ ἀόριστον δὲ ὥσπερ ἐκεῖνος, ἀλλὰ ὠρισμένην, ἀέρα λέγων αὐτὴν· διαφέρειν δὲ μανότητι καὶ πυκνότητι κατὰ τὰς οὐσίας, καὶ ἀραιούμενον μὲν πῦρ γίνεσθαι, πυκνούμενον δὲ ἄνεμον, εἶτα νέφος, ἔτι δὲ μᾶλλον ὕδωρ, εἶτα γῆν, εἶτα λίθους, τὰ δὲ ἄλλα ἐκ τούτων· κίνησιν δὲ καὶ οὗτος αἰδιον ποιεῖ, δι' ἣν καὶ τὴν μεταβολὴν γίνεσθαι. καὶ Διογένης δὲ ὁ Ἀπολλωνιάτης σχεδὸν νεώτατος γεγωνὸς τῶν περὶ ταῦτα σχολασάντων τὰ μὲν πλεῖστα συμπεφορημένως γέγραφε τὰ μὲν κατὰ Ἀναξαγόραν, τὰ δὲ κατὰ Λεύκιππον λέγων· τὴν δὲ τοῦ παντὸς φύσιν ἀέρα καὶ οὗτός φησιν ἄπειρον εἶναι καὶ αἰδιον, ἐξ οὗ πυκνουμένου καὶ μανουμένου καὶ μεταβάλλοντος τοῖς πάθεσι τὴν τῶν ἄλλων γίνεσθαι μορφήν. καὶ ταῦτα μὲν Θεόφραστος ἱστορεῖ περὶ τοῦ Διογένους.

[3] Simplic. in phys. f. 6v 418.

Τῶν δὲ πλείους λεγόντων οἱ μὲν πεπερασμένας, οἱ δὲ ἀπείρους ἔθεντο τῷ πλήθει τὰς ἀρχάς, καὶ τῶν πεπερασμένας οἱ μὲν δύο ὡς Παρμενίδης ἐν τοῖς πρὸς δόξαν πῦρ καὶ γῆν (ἢ μᾶλλον φῶς καὶ σκότος), ἢ ὡς οἱ Στωικοὶ θεὸν καὶ ὕλην οὐχ ὡς στοιχεῖον δηλονότι τὸν θεὸν λέγοντες, ἀλλ' ὡς τὸ μὲν ποιοῦν, τὸ δὲ πάσχον, οἱ δὲ τρεῖς ὡς ὕλην καὶ τὰ ἐναντία Ἀριστοτέλης, οἱ δὲ τέσσαρας ὡς Ἐμπεδοκλῆς ὁ Ἀκραγαντῖνος οὐ πολὺ κατόπιν τοῦ Ἀναξαγόρου γεγωνός, Παρμενίδου δὲ ζηλωτῆς καὶ πλησιαστής καὶ ἔτι μᾶλλον τῶν Πυθαγορείων· οὗτος δὲ τὰ μὲν σωματικὰ στοιχεῖα ποιεῖ τέτταρα, πῦρ καὶ ἀέρα καὶ ὕδωρ καὶ γῆν αἰδία μὲν ὄντα, μεταβάλλοντα δὲ πλήθει καὶ ὀλιγότητι κατὰ τὴν σύγκρισιν καὶ διάκρισιν, τὰς δὲ κυρίως ἀρχάς ὑφ' ὧν κινεῖται ταῦτα φιλίαν καὶ νεῖκος· δεῖ γὰρ διατελεῖν ἐναλλάξ κινούμενα τὰ στοιχεῖα ποτὲ μὲν ὑπὸ τῆς φιλίας συγκρινόμενα, ποτὲ δὲ ὑπὸ τοῦ νείκους διακρινόμενα· ὥστε καὶ ἐξ εἶναι κατ' αὐτὸν τὰς ἀρχάς· καὶ γὰρ ὅπου μὲν ποιητικὴν δίδωσι δύναμιν τῷ νεῖκει καὶ τῇ φιλίᾳ, ὅταν λέγῃ

ἄλλοτε μὲν φιλότῃτι συνερχόμεν' εἰς ἓν ἅπαντα

ἄλλοτε δ' αὖ δίχα πάντα φορεύμενα νεῖκος ἔχθει· ποτὲ δὲ τοῖς τέσσαρσιν ὡς ἰσόστοιχα συντάττει καὶ ταῦτα, ὅταν λέγῃ

ποτὲ δ' αὖ διέφν πλέον' ἐξ ἐνὸς εἶναι

πῦρ καὶ ὕδωρ καὶ γαῖα καὶ ἥερος ἅπλετον ὕψος

νεῖκός τ' οὐλόμενον δίχα τῶν ἀτάλαντον ἕκαστον

καὶ φιλότης ἐν τοῖσιν ἴση μῆκος τε πλάτος τε.

[4] Simplic. in phys. f. 6v 37-7r 3.

Τῶν δὲ ἀπείρους τῷ πλήθει λεγόντων οἱ μὲν ἀπλᾶς ἔλεγον καὶ ὁμογενεῖς, οἱ δὲ συνθέτους καὶ ἀνομογενεῖς καὶ ἐναντίας, κατὰ δὲ τὸ ἐπικρατοῦν χαρακτηριζομένας. Ἀναξαγόρας μὲν γὰρ Ἡγησιβούλου Κλαζομένιος κοινωνήσας τῆς Ἀναξιμένους φιλοσοφίας πρῶτος μετέστησε τὰς περὶ τῶν ἀρχῶν δόξας καὶ τὴν ἐλλείπουσαν αἰτίαν ἀνεπλήρωσε τὰς μὲν σωματικὰς ἀπείρους ποιήσας· πάντα γὰρ τὰ ὁμοιομερῆ οἶον ὕδωρ ἢ πῦρ ἢ χρυσὸν ἀγένητα μὲν εἶναι καὶ ἄφθαρτα, φαίνεσθαι δὲ γινόμενα καὶ ἀπολλύμενα συγκρίσει καὶ διακρίσει μόνον, πάντων μὲν ἐν πᾶσιν ἐνόντων, ἐκάστου δὲ κατὰ τὸ ἐπικρατοῦν ἐν αὐτῷ χαρακτηριζομένου. χρυσὸς γὰρ φαίνεται ἐκεῖνο ἐν ᾧ πολὺ χρυσίον ἐνὶ καίτοι πάντων ἐνόντων. λέγει γοῦν Ἀναξαγόρας ὅτι ‘ἐν παντὶ παντὸς μοῖρα ἔνεστι’ καὶ ‘ὅτων πλεῖστα ἐνὶ ταῦτα ἐνδηλότατα ἐν ἑκάστῳ ἔστι καὶ ἦν’. καὶ ταῦτά φησιν ὁ Θεόφραστος παραπλησίως τῷ Ἀναξιμάνδρῳ λέγειν τὸν Ἀναξαγόραν· ἐκεῖνος γὰρ φησιν ἐν τῇ διακρίσει τοῦ ἀπείρου τὰ συγγενῇ φέρεσθαι πρὸς ἄλληλα καὶ ὅτι μὲν ἐν τῷ παντὶ χρυσὸς ἐνῆν γίνεσθαι χρυσόν, ὅτι δὲ γῆ γῆν, ὁμοίως δὲ καὶ τῶν ἄλλων ἑκάστων ὡς οὐ γινομένων, ἀλλ’ ἐνυπαρχόντων πρότερον. τῆς δὲ κινήσεως καὶ τῆς γενέσεως αἴτιον ἐπέστησε τὸν νοῦν ὁ Ἀναξαγόρας, ὅφ’ οὗ διακρινόμενα τοὺς τε κόσμους καὶ τὴν τῶν ἄλλων φύσιν ἐγέννησεν. ‘καὶ οὕτω μὲν οὖν’ φησί ‘λαμβάνοντων δόξειεν ἂν ποιεῖν τὰς μὲν ὑλικὰς ἀρχὰς ἀπείρους, ὥσπερ εἴρηται, τὴν δὲ τῆς κινήσεως καὶ τῆς γενέσεως αἰτίαν μίαν. εἰ δέ τις τὴν μῆζιν τῶν ἀπάντων ὑπολάβοι μίαν εἶναι φύσιν ἀόριστον καὶ κατ’ εἶδος καὶ κατὰ μέγεθος, ὅπερ ἂν δόξειε βούλεσθαι λέγειν, συμβαίνει δύο τὰς ἀρχὰς αὐτὸν λέγειν τὴν τε τοῦ ἀπείρου φύσιν καὶ τὸν νοῦν, ὥστε πάντως φαίνεται τὰ σωματικὰ στοιχεῖα παραπλησίως ποιῶν Ἀναξιμάνδρῳ’.

Καὶ Ἀρχέλαος ὁ Ἀθηναῖος, ᾧ καὶ Σωκράτῃ συγγεγονέναι φασίν, Ἀναξαγόρου γενομένῳ μαθητῇ ἐν μὲν τῇ γενέσει τοῦ κόσμου καὶ τοῖς ἄλλοις πειράται τι φέρειν ἴδιον, τὰς ἀρχὰς δὲ τὰς αὐτὰς ἀποδίδωσιν ἅς περ Ἀναξαγόρας. οὗτοι μὲν οὖν ἀπείρους τῷ πλήθει καὶ ἀνομογενεῖς τὰς ἀρχὰς λέγουσι τὰς ὁμοιομερείας τιθέντες ἀρχὰς.

[5] Simplic. in phys. f. 5v 54-6r 18.

Μίαν δὲ τὴν ἀρχὴν ἦτοι ἐν τὸ ὄν καὶ πᾶν καὶ οὔτε πεπερασμένον οὔτε ἄπειρον οὔτε κινούμενον οὔτε ἡρεμοῦν Ξενοφάνη τὸν Κολοφώνιον τὸν Παρμενίδου διδάσκαλον ὑποτίθεσθαι φησιν ὁ Θεόφραστος ὁμολογῶν ἐτέρας

εἶναι μᾶλλον ἢ τῆς περὶ φύσεως ἱστορίας τὴν μνήμην τῆς τούτου δόξης. τὸ γὰρ ἐν τούτῳ καὶ πᾶν τὸν θεὸν ἔλεγεν ὁ Ξενοφάνης· ὃν ἕνα μὲν δείκνυσιν ἐκ τοῦ πάντων κράτιστον εἶναι· πλειόνων γάρ, φησὶν, ὄντων ὁμοίως ὑπάρχειν ἀνάγκη πᾶσι τὸ κρατεῖν· τὸ δὲ πάντων κράτιστον καὶ ἄριστον θεός. ἀγένητον δὲ ἐδείκνυν ἐκ τοῦ δεῖν τὸ γινόμενον ἢ ἐξ ὁμοίου ἢ ἐξ ἀνομοίου γίνεσθαι· ἀλλὰ τὸ μὲν ὅμοιον ἀπαθές φησιν ὑπὸ τοῦ ὁμοίου· οὐδὲν γὰρ μᾶλλον γεννᾶν ἢ γεννᾶσθαι προσήκει τὸ ὅμοιον ἐκ τοῦ ὁμοίου· εἰ δὲ ἐξ ἀνομοίου γίνοιτο, ἔσται τὸ ὃν ἐκ τοῦ μὴ ὄντος. καὶ οὕτως ἀγένητον καὶ αἰδῖον ἐδείκνυ. οὔτε δὲ ἄπειρον οὔτε πεπερασμένον εἶναι, διότι ἄπειρον μὲν τὸ μὴ ὃν ὡς οὔτε ἀρχὴν ἔχον οὔτε μέσον οὔτε τέλος· περαίνειν δὲ πρὸς ἄλληλα τὰ πλείω. παραπλησίως δὲ καὶ τὴν κίνησιν ἀφαιρεῖ καὶ τὴν ἡρεμίαν· ἀκίνητον μὲν γὰρ εἶναι τὸ μὴ ὄν· οὔτε γὰρ ἂν εἰς αὐτὸ ἕτερον οὔτε αὐτὸ πρὸς ἄλλο ἐλθεῖν· κινεῖσθαι δὲ τὰ πλείω τοῦ ἑνός· ἕτερον γὰρ εἰς ἕτερον μεταβάλλειν, ὥστε καὶ ὅταν ἐν ταύτῳ μένειν λέγῃ καὶ μὴ κινεῖσθαι

αἰεὶ δ' ἐν ταύτῳ μίμνει κινούμενον οὐδέν

οὐδὲ μετέρχεσθαι μιν ἐπιπρέπει ἄλλοτε ἄλλῃ, οὐ κατὰ τὴν ἡρεμίαν τὴν ἀντικειμένην τῇ κινήσει μένειν αὐτὸ φησιν, ἀλλὰ κατὰ τὴν ἀπὸ κινήσεως καὶ ἡρεμίας ἐξηρημένην μονήν. Νικόλαος δὲ ὁ Δαμασκηνὸς ὡς ἄπειρον καὶ ἀκίνητον λέγοντος αὐτοῦ τὴν ἀρχὴν ἐν τῇ Περί θεῶν ἀπομνημονεύει. Ἀλέξανδρος δὲ ὡς πεπερασμένον αὐτὸ καὶ σφαιροειδές, ἀλλ' ὅτι μὲν οὔτε ἄπειρον οὔτε πεπερασμένον αὐτὸ δείκνυσιν, ἐκ τῶν προειρημένων δῆλον, πεπερασμένον δὲ καὶ σφαιροειδές αὐτὸ διὰ τὸ πανταχόθεν ὅμοιον λέγει· καὶ πάντα νοεῖν δὲ φησιν αὐτὸ λέγων

ἀλλ' ἀπάνευθε πόνοιο νόου φρενὶ πάντα κραδαίνει.

[5a] Galen. in Hippocr. d. nat. hom. XV 25K.

Κακῶς δὲ καὶ τῶν ἐξηγητῶν ἔνιοι κατεψεύσαντο Ξενοφάνους ὥσπερ καὶ Σαβῖνος ὡδί πως γράψας αὐτοῖς ὀνόμασιν· ‘οὔτε γὰρ πάμπαν ἀέρα λέγω τὸν ἄνθρωπον ὥσπερ Ἀναξιμένης, οὔτε ὕδωρ ὡς Θαλῆς, οὔτε γῆν ὡς ἐν τινι Ξενοφάνης’· οὐδαμόθεν γὰρ εὐρίσκεται ὁ Ξενοφάνης ἀποφηνάμενος οὕτως. ἀλλὰ καὶ ὁ Σαβῖνος αὐτὸς εὐδηλὸς ἐστὶν ἐκ τῶν αὐτοῦ καταψευδόμενος, οὐχ ὑπ' ἀγνοίας ἐσφαλμένος. ἢ πάντως ἂν ὀνομαστὶ προσέγραψε τὸ βιβλίον, ἐν ᾧ ταῦτα ἀπεφάνετο. νῦν δ' οὕτως ἔγραψεν ‘οὔτε γῆν ὡς ἐν τινι Ξενοφάνης’. καὶ Θεόφραστος δ' ἂν ἐν ταῖς τῶν φυσικῶν δοξῶν ἐπιτομαῖς τὴν Ξενοφάνους δόξαν, εἴπερ οὕτως εἶχεν, ἐγγράφει. καὶ σοὶ πάρεστιν εἰ χαίροις τῇ περὶ τούτων ἱστορίᾳ τὰς τοῦ Θεοφράστου βίβλους ἀναγῶναι, καθ' ἃς τὴν

ἐπιτομὴν ἐποίησατο τῶν φυσικῶν δοξῶν.

[6] Alexander in metaph. p. 24, 5 Bon.

Περὶ Παρμενίδου καὶ τῆς δόξης αὐτοῦ καὶ Θεόφραστος ἐν τῷ πρώτῳ Περὶ τῶν φυσικῶν οὕτως λέγει·

Τούτῳ δ' ἐπιγενόμενος Παρμενίδης Πύρητος ὁ Ἐλεάτης - λέγει δὲ καὶ Ξενοφάνην - ἐπ' ἀμφοτέρας ἦλθε τὰς ὁδοὺς. καὶ γὰρ ὡς αἰδιὸν ἐστὶ τὸ πᾶν ἀποφαίνεται καὶ γένεσιν ἀποδιδόναι· πειρᾶται τῶν ὄντων οὐχ ὁμοίως περὶ ἀμφοτέρων δοξάζων, ἀλλὰ κατ' ἀλήθειαν μὲν ἐν τῷ πᾶν καὶ ἀγέννητον καὶ σφαιροειδὲς ὑπολαμβάνων, κατὰ δόξαν δὲ τῶν πολλῶν εἰς τὸ γένεσιν ἀποδοῦναι τῶν φαινομένων δύο ποιῶν τὰς ἀρχὰς πῦρ καὶ γῆν, τὴν μὲν ὡς ὕλην, τὸ δ' ὡς αἷτιον καὶ ποιοῦν.

[6a] Laertius Diogenes IX 21. 22

Ξενοφάνους δὲ διήκουσε Παρμενίδης Πύρητος Ἐλεάτης (τοῦτον Θεόφραστος ἐν τῇ Ἐπιτομῇ Ἀναξιμάνδρου φησὶν ἀκοῦσαι), ὅμως δ' οὐκ ἀκούσας καὶ Ξενοφάνους οὐκ ἠκολούθησεν αὐτῷ ...

πρῶτος δ' οὗτος τὴν γῆν ἀπέφηνε σφαιροειδῆ καὶ ἐν μέσῳ κεῖσθαι. δύο τ' εἶναι στοιχεῖα, πῦρ καὶ γῆν· καὶ τὸ μὲν δημιουργοῦ τάξιν ἔχειν, τὴν δ' ὕλης. γένεσιν τ' ἀνθρώπων ἐξ ἱλὸς πρῶτον γενέσθαι. †αὐτὸν δ' ὑπάρχειν τὸ θερμὸν καὶ τὸ ψυχρόν, ἐξ ὧν τὰ πάντα συνεστάναι. καὶ τὸν νοῦν καὶ τὴν ψυχὴν ταῦτον εἶναι, καθὰ μένηται καὶ Θεόφραστος ἐν τοῖς Φυσικοῖς πάντων σχεδὸν ἐκτιθέμενος τὰ δόγματα. δισσήν τ' ἔφη εἶναι τὴν φιλοσοφίαν τὴν μὲν κατ' ἀλήθειαν, τὴν δὲ κατὰ δόξαν. διὸ καὶ φησί που·

χρεὼ δέ σε πάντα πυθέσθαι

ἡμὲν ἀληθείης εὐπειθέος ἀτρεμεῖς ἦτορ

ἡδὲ βροτῶν δόξας, τῆς οὐκ ἐνί πίστις ἀληθῆς.

[7] Simplicius in phys. f. 25r 16

Ὡς ὁ Ἀλέξανδρος ἱστορεῖ, ὁ μὲν Θεόφραστος οὕτως ἐκτίθεται ἐν τῷ πρώτῳ τῆς Φυσικῆς ἱστορίας (de Parmenide)·

Τὸ παρὰ τὸ ὄν οὐκ ὄν, τὸ οὐκ ὄν οὐδέν, ἐν ᾧ τὸ ὄν.

[8] Simplicius in phys. f. 7r 6-26.

Λεύκιππος δὲ ὁ Ἐλεάτης ἢ Μιλήσιος - ἀμφοτέρως γὰρ λέγεται περὶ αὐτοῦ - κοινωνήσας Παρμενίδῃ τῆς φιλοσοφίας οὐ τὴν αὐτὴν ἐβάδισε Παρμενίδῃ καὶ Ξενοφάνει περὶ τῶν ὄντων ὁδόν, ἀλλ' ὡς δοκεῖ τὴν ἐναντίαν· ἐκείνων γὰρ ἐν καὶ ἀκίνητον καὶ ἀγέννητον καὶ πεπερασμένον ποιοῦντων τὸ πᾶν καὶ τὸ μὴ ὄν μὴδὲ ζητεῖν συγχωροῦντων, οὗτος ἄπειρα καὶ ἀεὶ κινούμενα ὑπέθετο

στοιχεῖα τὰς ἀτόμους, καὶ τῶν ἐν αὐτοῖς σχημάτων ἅπειρον τὸ πλῆθος διὰ τὸ μηδὲν μᾶλλον τοιοῦτον ἢ τοιοῦτον εἶναι [ταύτην γὰρ] καὶ γένεσιν καὶ μεταβολὴν ἀδιάλειπτον ἐν τοῖς οὕσι θεωρῶν· ἔτι δὲ οὐδὲν μᾶλλον τὸ ὄν ἢ τὸ μὴ ὄν ὑπάρχειν καὶ αἷτια ὁμοίως εἶναι τοῖς γινομένοις ἄμφω· τὴν γὰρ τῶν ἀτόμων οὐσίαν ναστὴν καὶ πλήρη ὑποτιθέμενος ὄν ἔλεγεν εἶναι καὶ ἐν τῷ κενῷ φέρεσθαι ὅπερ μὴ ὄν ἐκάλει καὶ οὐκ ἔλαττον τοῦ ὄντος εἶναί φησι. παραπλησίως δὲ καὶ ὁ ἐταῖρος αὐτοῦ Δημόκριτος ὁ Ἀβδηρίτης ἀρχὰς ἔθετο τὸ πλῆρες καὶ τὸ κενόν, ὧν τὸ μὲν ὄν, τὸ δὲ μὴ ὄν ἐκάλει· ὡς <γὰρ> ὕλην τοῖς οὕσι τὰς ἀτόμους ὑποτιθέντες τὰ λοιπὰ γεννῶσι ταῖς διαφοραῖς αὐτῶν· τρεῖς δὲ εἰσιν αὗται· ῥυσμὸς τροπὴ διαθιγὴ, ταὐτὸν δὲ εἰπεῖν σχῆμα καὶ τάξις καὶ θέσις· πεφυκέναι γὰρ τὸ ὅμοιον ὑπὸ τοῦ ὁμοίου κινεῖσθαι καὶ φέρεσθαι τὰ συγγενῇ πρὸς ἄλληλα καὶ τῶν σχημάτων ἕκαστον εἰς ἑτέραν ἐγκοσμούμενον σύγκρισιν ἄλλην ποιεῖν διάθεσιν· ὥστε εὐλόγως ἀπείρων οὐσῶν τῶν ἀρχῶν πάντα τὰ πάθη καὶ τὰς οὐσίας ἀποδώσειν ἐπηγγέλλοντο ὑφ’ οὗ τέ τι γίνεται καὶ πῶς· διὸ καὶ φασὶ μόνους τοῖς ἅπειρα ποιοῦσι τὰ στοιχεῖα πάντα συμβαίνειν κατὰ λόγον. καὶ τῶν ἐν ταῖς ἀτόμοις σχημάτων ἅπειρον τὸ πλῆθος φασὶ διὰ τὸ μηθὲν μᾶλλον τοιοῦτον ἢ τοιοῦτον εἶναι. ταύτην γὰρ αὐτοὶ τῆς ἀπειρίας αἰτίαν ἀποδιδόασιν. καὶ Μητρόδωρος δὲ ὁ Χῖος ἀρχὰς σχεδόν τι τὰς αὐτὰς τοῖς περὶ Δημόκριτον ποιεῖ τὸ πλῆρες καὶ τὸ κενόν τὰς πρώτας αἰτίας ὑποθέμενος, ὧν τὸ μὲν ὄν, τὸ δὲ μὴ ὄν εἶναι· περὶ δὲ τῶν ἄλλων ἰδίαν τινὰ ποιεῖται τὴν μέθοδον. αὕτη μὲν ἢ σύντομος περιλήψις τῶν ἱστορημένων περὶ ἀρχῶν οὐ κατὰ χρόνους ἀναγραφεῖσα, ἀλλὰ κατὰ τὴν τῆς δόξης συγγένειαν.

[9] Simplic. in phys. f. 6v 20-25

Ὁ μέντοι Θεόφραστος τοὺς ἄλλους προῖστορήσας ‘Τούτοις’ φησὶν ‘ἐπιγενόμενος Πλάτων τῇ μὲν δόξῃ καὶ τῇ δυνάμει πρότερος τοῖς δὲ χρόνοις ὕστερος καὶ τὴν πλείστην πραγματείαν περὶ τῆς πρώτης φιλοσοφίας ποιησάμενος ἐπέδωκεν ἑαυτὸν καὶ τοῖς φαινομένοις ἀντάμενος τῆς περὶ φύσεως ἱστορίας, ἐν ᾗ δύο τὰς ἀρχὰς βούλεται ποιεῖν τὸ μὲν ὑποκείμενον ὡς ὕλην ὃ προσαγορεύει πανδεχές, τὸ δὲ ὡς αἷτιον καὶ κινεῖν ὃ περιάπτει τῇ τοῦ θεοῦ καὶ τῇ τοῦ ἀγαθοῦ δυνάμει’. ὁ μέντοι Ἀλέξανδρος ὡς τρεῖς λέγοντος τὰς ἀρχὰς ἀπομνημονεύει τὴν ὕλην καὶ τὸ ποιοῦν καὶ τὸ παράδειγμα.

[10] Proclus in Timaeum p. 176. Basil. 416 Schneider

Καὶ τῶν παλαιῶν τινες ἐπέπληξαν τῷ Πλάτῳ λέγοντες ὡς ‘οὐκ ὀρθῶς ἀρχὴν ἀρχῆς ἐπιζητεῖ καὶ γένεσιν ἀγενήτου πράγματος· εἰ γὰρ καὶ τῶν πρώτων τὰ αἷτια ζητήσομεν καὶ τῶν αὐθυποστάτων γενέσεις ἐπινοήσομεν, εἰς

ἄπειρον προϊόντες λησόμεθα καὶ τέλος οὐδὲν ἔχον τῆς θεωρίας· ὥσπερ γὰρ ὁ πάντα ἀποδεικτὰ νενομικῶς αὐτὴν μάλιστα τὴν ἀπόδειξιν ἀναιρεῖ, τοῦτον τὸν τρόπον καὶ ὁ πάντων αἰτίας ἐπιζητῶν ἄρδην ἀνατρέπει τὰ ὄντα πάντα καὶ τὴν τάξιν αὐτῶν τὴν ἀπὸ τινος ὀρισμένης ἀρχῆς προϊοῦσαν· τοιαῦτα μὲν ὁ Θεόφραστος ἐπιτιμᾷ τῷ Πλάτωνα περὶ τῆσδε τῆς ψυχογονίας οὐδὲ ἐπὶ τῶν φυσικῶν πάντων λέγων δεῖν ἡμᾶς ἐπιζητεῖν τὸ διὰ τί· γελοῖον γάρ φησιν ἀπορεῖν, διὰ τί καίει τὸ πῦρ [καὶ διὰ τί πῦρ] καὶ διὰ τί ψύχει ἡ χιών.

[11] Taurus ap. Philopon. adv. Procl. VI 8. 27

Καὶ Θεόφραστος μέντοι ἐν τῷ Περὶ τῶν φυσικῶν δοξῶν κατὰ Πλάτωνά φησι γενητὸν τὸν κόσμον καὶ οὕτω ποιεῖται τὰς ἐνστάσεις, παρεμφαίνει δὲ ὅτι ἴσως σαφηνείας χάριν γενητὸν αὐτὸν ὑποτίθεται. Idem l. c. VI 21. 27.

Ὁ δὲ Θεόφραστος εἰπὼν ὅτι ‘τάχ’ ἂν γενητὸν λέγοι σαφηνείας χάριν, ὡς καὶ τοῖς διαγράμμασι παρακολουθοῦμεν γινομένοις’ φησί· ‘πλὴν ἴσως ἡ γένεσις οὐχ ὁμοίως ἔχει καὶ ἐπὶ τῶν διαγραμμάτων’.

[12] [Philo] περὶ ἀφθαρσίας κόσμου cc. 23-27 p. 510,11-516,20 Mang. 264,3-276,7 Bern.

Θεόφραστος μέντοι φησὶ τοὺς γένεσιν καὶ φθορὰν τοῦ κόσμου κατηγοροῦντας ὑπὸ τεττάρων ἀπατηθῆναι τῶν μεγίστων, γῆς ἀνωμαλίας, θαλάττης ἀναχωρήσεως, ἐκάστου τῶν τοῦ ὅλου μερῶν διαλύσεως, χερσαίων φθορᾶς κατὰ γένη ζώων. κατασκευάζειν δὲ τὸ μὲν πρῶτον οὕτως· ‘εἰ μὴ γενέσεως ἀρχὴν ἔλαβεν ἡ γῆ, μέρος ὑпанεστὸς οὐδὲν ἂν ἔτι αὐτῆς ἑωρᾶτο, χθαμαλὰ δ’ ἤδη τὰ ὄρη πάντ’ ἐγεγένητο καὶ οἱ γεωλόφοι πάντες ἰσόπεδοι τῇ πεδιάδι· τοσοῦτων γάρ καθ’ ἕκαστον ἐνιαυτὸν ὄμβρων ἐξ αἰδίου φερομένων εἰκὸς ἦν τῶν διηρμένων πρὸς ὕψος τὰ μὲν χειμάρροις ἀπερρῆχθαι, τὰ δ’ ὑπονοστήσαντα κεχαλάσθαι, πάντα δὲ διὰ πάντων ἤδη λελειάνθαι· νυνὶ δὲ συνεχεῖς ἀνωμαλῖαι καὶ παμπόλλων ὀρῶν αἱ πρὸς αἰθέριον ὕψος ὑπερβολαὶ μηνύματ’ ἐστὶ τοῦ τὴν γῆν μὴ αἰδίου εἶναι· πάλαι γάρ, ὡς ἔφην, ἐν ἀπείρῳ χρόνῳ ταῖς ἐπομβρίαις ἀπὸ περάτων ἐπὶ πέρατα πᾶσ’ ἂν λεωφόρος ἐγεγένητο. πέφυκε γὰρ ἡ ὕδατος φύσις καὶ μάλιστα ἀφ’ ὑψηλοτάτων καταράττουσα τὰ μὲν ἐξωθεῖν τῇ βίᾳ, τὰ δὲ τῷ συνεχεῖ τῶν ψεκᾶδων κολάπτουσα κοιλαίνειν ὑπεργάζεσθαι τε τὴν σκληρόγεον καὶ λιθωδεστάτην ὀρυκτῆρων οὐκ ἔλαττον’. ‘καὶ μὴν ἢ γε θάλασσα’ φασὶν ‘ἤδη μεμείωται· μάρτυρες δ’ αἱ νήσων εὐδοκιμώταται· Ῥόδος τε καὶ Δῆλος· αὗται γὰρ τὸ μὲν παλαιὸν ἠφανισμένα κατὰ τῆς θαλάττης ἐδεδύκεσαν ἐπικλυζόμεναι, χρόνῳ δ’ ὕστερον ἐλαττουμένης ἡρέμα κατ’ ὀλίγον ἀνίσχουσαι διεφάνησαν, ὡς αἱ περὶ αὐτῶν

ἀναγραφείσαι μηνύουσιν ἱστορίαι· τὴν δὲ Δῆλον καὶ Ἀνάφην ὠνόμασαν δι' ἀμφοτέρων ὀνομάτων πιστούμενοι τὸ λεγόμενον, ἐπειδὴ γὰρ ἀναφανείσα δῆλη ἐγένετο ἀδηλουμένη καὶ ἀφανὴς οὕσα τὸ πάλαι. πρὸς δὲ τούτοις μεγάλων πελαγῶν μεγάλους κόλπους καὶ βαθεῖς ἀναξηρανθέντας ἡπειρωσθαι καὶ γεγενῆσθαι τῆς παρακειμένης χώρας μοῖραν οὐ λυπρὰν σπειρομένους καὶ φυτευομένους, οἷς σημεῖ' ἄττα τῆς παλαιᾶς ἐναπολελειφθαι θαλαττώσεως ψηφιδᾶς τε καὶ κόγχας καὶ ὅσα ὁμοιότροπα πρὸς αἰγιαλοὺς εἶωθεν ἀποβράττεσθαι. διὸ καὶ Πίνδαρος ἐπὶ τῆς Δήλου φησί·

Χαῖρ', ὦ θεοδμάτα, λιπαροπλοκάμου

παίδεσσι Λατοῦς ἱμεροέστατον ἔρνος,

Πόντου θύγατερ, χθονὸς εὐρείας ἀκίνητον τέρας· ἂν τε βροτοί

Δᾶλον κυκλήσκουσιν, μάκαρες δ' ἐν ὀλύμπῳ τηλέφαντον κυανέας χθονὸς ἄστρον.

θυγατέρα γὰρ Πόντου τὴν Δῆλον εἶρηκε τὸ λεχθὲν αἰνιττόμενος. εἰ δὴ μειοῦται ἢ θάλαττα, μειωθήσεται μὲν ἡ γῆ, μακραῖς δ' ἐνιαυτῶν περιόδοις καὶ εἰς ἅπαν ἐκάτερον στοιχεῖον ἀναλωθήσεται, δαπανηθήσεται <δὲ> καὶ ὁ σύμπας ἀήρ ἐκ τοῦ κατ' ὀλίγον ἐλαττούμενος, ἀποκριθήσεται δὲ πάντ' εἰς μίαν οὐσίαν τὴν πυρός·

Πρὸς δὲ τὴν τοῦ τρίτου κεφαλαίου κατασκευὴν χρῶνται λόγῳ τοιῷδε· 'φθείρεται πάντως ἐκεῖνο, οὗ πάντα τὰ μέρη φθαρτά ἐστι, τοῦ δὲ κόσμου πάντα τὰ μέρη φθαρτά ἐστι, φθαρτὸς ἄρα ὁ κόσμος ἐστίν. ὁ δ' ὑπερεθέμεθα, νῦν ἐπισκεπτέον. ποῖον μέρος τῆς γῆς, ἴν' ἀπὸ ταύτης ἀρξώμεθα, μεῖζον ἢ ἐλαττον, οὐ χρόνῳ διαλυθήσεται; λίθων οἱ κραταιότατοι ἄρ' οὐ μυδῶσι καὶ σήπονται κατὰ τὴν ἔξωθεν ἀσθένειαν - ἡ δ' ἐστὶ πνευματικὸς τόνος, δεσμὸς οὐκ ἄρρηκτος, ἀλλὰ μόνον δυσδιάλυτος - θρυπτόμενοι καὶ ρέοντες εἰς λεπτήν τὸ πρῶτον ἀναλύονται κόνιν; [εἴθ' ὕστερον δαπανηθέντες ἐξαναλύονται] τί δέ; εἰ μὴ πρὸς ἀνέμων ριπίζοιτο τὸ ὕδωρ, ἀκίνητον ἑαθὲν οὐχ ὑφ' ἡσυχίας νεκροῦται; μεταβάλλει γοῦν καὶ δυσωδέστατον γίνεται οἷα ψυχὴν ἀφηρημένον ζῶον. αἶ γε μὴν ἀέρος φθοραὶ παντί τῳ δῆλαι· νοσεῖν γὰρ καὶ φθίνειν καὶ τρόπον τιν' ἀποθνήσκειν ἐφύκεν. ἐπεὶ τί ἂν τις μὴ στοχαζόμενος ὀνομάτων εὐπρεπείας ἀλλὰ τάληθοῦς, εἴποι λοιμὸν εἶναι πλὴν ἀέρος θάνατον τὸ οἰκεῖον πάθος ἀναχέοντος ἐπὶ φθορᾷ πάντων ὅσα ψυχῆς μεμοίραται; τί χρὴ μακρηγορεῖν περὶ πυρός; ἀτροφῆσαν γὰρ αὐτίκα σβέννυται χωλόν, ἧ φασιν οἱ ποιηταί, γεγονὸς ἐξ ἑαυτοῦ. διὸ σκηριπτόμενον ὀρθοῦται κατὰ τὴν τῆς ἀναφθείσης ὕλης νομὴν, ἐξαναλωθείσης δ' ἀφανίζεται. τὸ παραπλήσιον

μέντοι καὶ τοὺς κατὰ τὴν Ἰνδικὴν δράκοντάς φασι πάσχειν. ἀνέροντας γὰρ ἐπὶ τὰ μέγιστα τῶν ζώων, ἐλέφαντας, περὶ νῶτα καὶ νηδὺν ἅπασαν εἰλεῖσθαι, φλέβα δ' ἣν ἂν τύχη διελόντας ἐμπίνειν τοῦ αἵματος, ἀπλήστως ἐπισπωμένους βιαίῳ πνεύματι καὶ συντόνῳ ροίζῳ. μέχρι μὲν οὖν τινὸς ἐξαναλουμένους ἐκείνους ἀντέχειν ὑπ' ἀμηχανίας ἀνασκιρτῶντας καὶ τῇ προνομαίᾳ τὴν πλευρὰν τύπτοντας ὡς καθιζομένους τῶν δρακόντων, εἴτ' ἀεὶ κενουμένου τοῦ ζωτικοῦ πηδᾶν μὲν μηκέτι δύνασθαι, κραδαιομένους δ' ἐστάναι, μικρὸν δ' ὕστερον καὶ τῶν σκελῶν ἐξασθενησάντων κατασεισθέντας ὑπὸ ληλασίας ἀποψύχειν· πεσόντας δὲ τοὺς αἰτίους τοῦ θανάτου συναπολλύναι τρόπῳ τοιῷδε· μηκέτ' ἔχοντες τροφήν οἱ δράκοντες, ὃν περιέθεσαν δεσμὸν ἐπιχειροῦσιν ἐκλύειν ἀπαλλαγὴν ἤδη ποθοῦντες. ὑπὸ δὲ τοῦ βάρους τῶν ἐλεφάντων θλιβόμενοι πιεζοῦνται, καὶ πολὺ μᾶλλον, ἐπειδὰν τύχη στέριφον <ὄν> καὶ λιθῶδες τὸ ἔδαφος· ἰλυσπώμενοι γὰρ καὶ πάντα ποιοῦντες εἰς διάλυσιν ὑπὸ τῆς τοῦ πιέσαντος βίας πεδηθέντες ἑαυτοὺς πολυτρόπως ἐν ἀμηχανοῖς καὶ ἀπόροις γυμνάσαντες ἐξασθενοῦσι, <καὶ> καθάπερ οἱ καταλευσθέντες ἢ τείχους αἰφνίδιον ἐπενεχθέντος προκαταληφθέντες, οὐδ' ὅσον ἀνακῦσαι δυνάμενοι πνιγῇ τελευτῶσιν. εἰ δὴ τῶν μερῶν ἕκαστον τοῦ κόσμου φθορὰν ὑπομένει, δηλονότι καὶ ὁ ἐξ αὐτῶν παγίς κόσμος ἄφθαρτος οὐκ ἔσται. τὸν δὲ τέταρτον καὶ λοιπὸν λόγον ἀκριβοτέον ὧδέ φασιν· 'εἰ ὁ κόσμος αἰδῖος ἦν, ἦν ἂν καὶ τὰ ζῶα αἰδία καὶ πολὺ γε μᾶλλον τὸ τῶν ἀνθρώπων γένος, ὅσῳ καὶ τῶν ἄλλων ἄμεινον. ἀλλὰ καὶ ὀψίγονον φανῆναι τοῖς βουλομένοις ἐρευνᾶν τὰ φύσεως· εἰκὸς γάρ, μᾶλλον δ' ἀναγκαῖον ἀνθρώποις συνυπάρξαι τὰς τέχνας ὡς ἂν ἰσθλίκας, οὐ μόνον ὅτι λογικῇ φύσει τὸ ἐμμέθοδον οἰκεῖον, ἀλλὰ καὶ ὅτι ζῆν ἄνευ τούτων οὐκ ἔστιν· ἴδωμεν οὖν τοὺς ἐκάστων χρόνους ἀλογήσαντες τῶν ἐπιτραγωδουμένων θεοῖς μύθων εἰ μὴ αἰδῖος ἄνθρωπος, οὐδ' ἄλλο τι ζῶον, ὥστ' οὐδ' αἱ δεδεγμένοι ταῦτα χῶραι, γῆ καὶ ὕδωρ καὶ ἀήρ. ἐξ ὧν τὸ φθαρτὸν εἶναι τὸν κόσμον δῆλόν ἐστιν'.

Ἀναγκαῖον δὲ πρὸς τὴν τοσαύτην εὐρεσιλογίαν ἀπαντῆσαι, μὴ τις τῶν ἀπειροτέρων ἐνδοὺς ὑπαχθῇ· καὶ ἀρκτέον γε τῆς ἀντιρρήσεως, ἀφ' οὗ καὶ τῆς ἀπάτης οἱ σοφισταί· 'ἀνωμαλίας οὐκέτ' ἐχρῆν εἶναι τῆς γῆς, εἴπερ αἰδῖος ἦν ὁ κόσμος'. διὰ τί, ὧ γενναῖοι; φήσουσι γὰρ ἕτεροι παρελθόντες, ὅτι δένδρων οὐδὲν αἱ φύσεις τῶν ὀρῶν διαφέρουσιν, ἀλλὰ καθάπερ ἐκεῖναι καιροῖς μὲν τισι φυλλορροεῖ, καιροῖς δὲ πάλιν ἀνηβᾷ, - διὸ καὶ τὸ ποιητικὸν εὖ εἴρηται 'φύλλα τὰ μὲν τ' ἀνεμος χαμάδις χέει, ἄλλα δέ θ' ὕλη τηλεθόωσα φύει, ἕαρος δ' ἐπιγίγνεται ὥρη' - τὸν αὐτὸν τρόπον καὶ τῶν ὀρῶν τὰ μὲν ἀποθραύεται

μέρη, τὰ δὲ προσφύεται. μακροῖς δὲ χρόνοις ἢ πρόσφους καθίσταται γνώριμος, διότι τὰ μὲν δένδρα ὠκυτέρα χρώμενα τῇ φύσει θάπτον καταλαμβανομένην ἔχει τὴν ἐπίδοσιν, τὰ δὲ ὄρη βραδυτέρα, διὸ καὶ τὰς ἐκφύσεις αὐτῶν αἰσθητὰς ὅτι μὴ χρόνῳ μακρῷ μόλις εἶναι συμβέβηκεν. εἰκόσιν γε τὸν τρόπον τῆς γενέσεως αὐτῶν ἀγνοεῖν, ἐπεὶ κἂν ἴσως αἰδεσθέντες ἡσύχασαν. φθόνος δ' οὐδεὶς ἀναδιδάσκειν. ἔστι δ' οὔτε νέον τὸ λεγόμενον οὔτε ῥήμαθ' ἡμῶν, ἀλλὰ παλαιὰ σοφῶν ἀνδρῶν, οἷς οὐδὲν ἀδιερεύνητον τῶν εἰς ἐπιστήμην ἀναγκαίων ἀπολέλειπται. ὅταν τὸ κατακεκλεισμένον ἐν τῇ γῇ πυρῶδες ἄνω τῇ τοῦ πυρὸς ἐλαύνηται φυσικῇ δυνάμει, πρὸς τὸν οἰκεῖον τόπον στείχει, κἂν τινος λάβηται βραχείας ἀναπνοῆς, ἄνω μὲν συνανασπᾷ πολλὴν τῆς γεώδους οὐσίας, ὅσῃν ἂν οἶόν τ' ᾔῃ, ἔξω δ' ἐπιγενόμενον φέρεται βραδυτέρον, ἢ δὲ μέχρι πολλοῦ συμπαραλθεῖν βιασθεῖσα πρὸς μήκιστον ἀρθεῖσ' ὕψος στέλλεται κορυφουμένη καὶ πρὸς ὀξείαν ἀποτελευτᾷ κορυφὴν τὸ πυρὸς σχῆμα μιμουμένη. γίνεται γὰρ τοῦ κουφοτάτου καὶ βαρυτάτου τότε, τῶν φύσει ἀντιπάλων, ἀναγκαῖα συρραζάντων διαμάχη πρὸς τὴν οἰκεῖαν ἐκατέρου χώραν ἐπειγομένου καὶ πρὸς τὸ βιαζόμενον ἀντιτείνοντος· τὸ μὲν δὴ πῦρ συνανέλκον <τὴν> γῆν ὑπὸ τοῦ περὶ αὐτὴν νευστικοῦ βρίθειν ἀναγκάζεται, ἢ δὲ γῆ κατωτάτω ταλαντεύουσα τῷ τοῦ πυρὸς ἀνωφοίτῳ συνεπελαφρισθεῖσα μετέωρος ἐξαίρεται καὶ κρατηθεῖσα μόλις ὑπὸ δυνατωτέρας τῆς ἐπικουφιζούσης ἰσχύος ἄνω πρὸς τὴν τοῦ πυρὸς ἔδραν ὠθεῖται κἀνίσταται. τί οὖν θαυμαστόν, εἰ μὴ τὰ ὄρη ταῖς τῶν ὑετῶν φοραῖς ἐξανήλωται τῆς συνεχούσης αὐτὰ δυνάμεως, ὑφ' ἧς καὶ διανίσταται μάλα παγίως καὶ κραταιῶς ἐνελημμένης· λυθέντος γὰρ δεσμοῦ τοῦ συνέχοντος εἰκὸς ἦν διαλυθῆναι καὶ πρὸς ὕδατος σκεδασθῆναι, δυνάμει δὲ σφιγγόμενα τῇ τοῦ πυρὸς στεγανώτερον πρὸς τὰς τῶν ὑετῶν φορὰς ἀντέχειν. ταῦτα μὲν οὖν ἡμῖν λελέχθω περὶ τοῦ τὴν ἀνωμαλίαν τῆς γῆς πίστιν οὐκ εἶναι γενέσεως καὶ φθορᾶς κόσμου.

Πρὸς δὲ τὸ ἀπὸ τῆς μειώσεως τῆς θαλάσσης ἐπιχειρηθὲν ἐκεῖνο δεόντως ἂν λέγοιτο· μὴ τὰς ἀνασχούσας νήσους αὐτὸ μόνον ἀεὶ μὴδ' εἰ τινες ἀποτομαὶ κατακλυζόμεναι τοῖς πάλαι χρόνοις αὖθις ἠπειρώθησαν, σκοπεῖτε. φυσιολογίας γὰρ ἀντίπαλον φιλονεικία τριπόθητον ἡγουμένης ἀλήθειαν ἰχνηλατεῖν. ἀλλὰ πολυπραγμονεῖτε καὶ τοῦναντίον, ὅσαι μὲν ἐν ἠπείροις οὐ παράλιοι μόνον, ἀλλὰ καὶ μεσόγειοι μοῖραι κατεπόθησαν, ὅση δὲ χέρσος θαλαττωθεῖσα μυριοφόροις ναυσὶν ἐμπλεῖται. <ἦ> τὴν περὶ τὸν ἱερώτατον Σικελικὸν πορθμὸν ἄδομένην ἱστορίαν ἀγνοεῖτε; τὸ <μὲν> παλαιὸν <ἦν>

ἥπειρος Ἰταλία Σικελία συνάπτουσα, μεγάλων δὲ τῶν παρ' ἑκάτερα πελαγῶν
βιαίοις πνεύμασιν ἐξ ἐναντίας ἐπιδραμόντων ἡ μεθόριος ἐπεκλύσθη καὶ
ἀνερράγη, παρ' ἣν καὶ πόλις ἐπώνυμος τοῦ πάθους Ῥήγιον κτισθεῖς
ὠνομάσθη. καὶ τὸυναντίον οὗ προσεδόκησεν ἄν τις ἀπέβη. συνεζεύχθη μὲν
γὰρ τὰ τέως διεστῶτα πελάγη κατὰ τὴν σύρρυσιν ἐνωθέντα, ἡ δ' ἠνωμένη γῆ
τῷ μεθορίῳ πορθμῷ διεξεύχθη, παρ' ὃν ἥπειρος οὕσα Σικελία νῆσος ἐβιάσθη
γενέσθαι. πολλὰς δὲ καὶ ἄλλας λόγος τῆς θαλάττης ὑπερσχούσης ἠφανίσθαι
πόλεις καταποθείσας, ἐπεὶ καὶ κατὰ Πελοπόννησόν φασι τρεῖς,

Αἴγειραν Βοῦράν τε καὶ ὑψηλὴν Ἑλίκειαν

τείχεσιν, ἡ τὰχ' ἐμελλε περὶ βρύα μύρια φύσειν, εὐδαίμονας τὸ πάλαι
γενομένης πολλῇ τοῦ πελάγους ἐπικλυσθῆναι φορᾶ. ἡ δ' Ἀτλαντὶς νῆσος,
'ἅμα Λιβύης καὶ Ἀσίας μείζων', ἣ φησιν ἐν Τιμαίῳ Πλάτων, 'ἡμέρα μιᾶ καὶ
νυκτὶ σεισμῶν ἐξαισίων καὶ κατακλυσμῶν γενομένων δῦσα κατὰ τῆς
θαλάσσης ἐξαίφνης ἠφανίσθη', γενομένη πέλαγος οὐ πλωτόν, ἀλλὰ
βαραθρῶδες. οὐδὲν οὖν εἰς τὸ φθείρεσθαι τὸν κόσμον ἡ πλασθεῖσα τῷ λόγῳ
μείωσις τῆς θαλάττης συνεργεῖ· φαίνεται γὰρ ὧν μὲν ἐξαναχωροῦσα, τὰ δ'
ἐπικλύζουσα. ἐχρῆν δὲ μὴ θάτερον τῶν γινομένων, ἀλλὰ συνάμφω
θεωροῦντας ἐπικρίνειν, ἐπεὶ κὰν τοῖς περὶ βίον ἀμφισβητήμασιν ὁ νόμιμος
δικαστὴς πρὶν καὶ τῶν ἀντιδίκων ἀκοῦσαι, γνώμην οὐκ ἀποφανεῖται.

Καὶ μὴν ὁ τρίτος λόγος ἐξ ἑαυτοῦ διελέγχεται μὴ ὑγιῶς ἐρωτηθεῖς, ἀπὸ τῆς
εὐθὺς ἐν ἀρχῇ φάσεως. οὐ γὰρ δῆπουθεν οὗ πάντα τὰ μέρη φθείρεται,
φθαρτόν ἐστιν ἐκεῖνο, ἀλλ' οὗ πάντα τὰ μέρη ἅμα καὶ ἐν ταῦτῳ ἀθρόα κατὰ
τὸν αὐτὸν χρόνον· ἐπεὶ καὶ ἄκρον ἀποκοπεῖς τις δάκτυλον ζῆν οὐ κεκώλυται,
εἰ δὲ τὴν κοινωνίαν τῶν μερῶν καὶ μελῶν πᾶσαν, αὐτίκα τελευτήσῃ. τὸν
αὐτὸν οὖν τρόπον, εἰ μὲν συλλήβδην ἀπαξάπαντα τὰ στοιχεῖα ὑφ' ἑνα καιρὸν
ἠφανίζετο, φάσκειν ἐνδέχεσθαι τὸν κόσμον φθορὰν ἣν ἀναγκαῖον. εἰ δ'
ἕκαστον ἰδίᾳ πρὸς τὴν τοῦ γείτονος μεταβάλλει φύσιν, ἀθανατίζεται μᾶλλον ἢ
φθείρεται κατὰ τὸ φιλοσοφηθὲν ὑπὸ τοῦ τραγικοῦ·

θνήσκει δ' οὐδὲν τῶν γιγνομένων

διακρινόμενον δ' ἄλλο πρὸς ἄλλο

μορφὴν ἐτέραν ἀπέδειξεν.

παντελὴς γε μὴν εὐήθεια τὸ γένος τῶν ἀνθρώπων ἀπὸ τῶν τεχνῶν
ἐξετάζεσθαι. τῇ γὰρ περὶ τὸν λόγον ἀτοπία τις ἀκολουθήσας νέον τὸν κόσμον
ἀποφανεῖ κομιδῇ μόλις πρὸ χιλίων παγέντα ἐνιαυτῶν, ἐπεὶ καὶ οὕς
παρελήφαμεν τῶν ἐπιστημῶν εὐρετὰς τὸν λεχθέντ' τῶν ἐνιαυτῶν ἀριθμὸν

οὐχ ὑπερβάλλουσιν. εἰ δὲ δὴ καὶ λεκτέον τὰς τέχνας ἰσὴλικας ἀνθρώπων γένει, μεθ' ἱστορίας φυσικῆς, ἀλλ' οὐκ ἀπερισκέπτως καὶ ῥαθύμως λεκτέον. ἢ δ' ἱστορία τί; φθοραὶ τῶν κατὰ γῆν οὐκ ἀθρόων ἀπάντων ἀλλὰ τῶν πλείστων δυσὶ ταῖς μεγίσταις αἰτίαις ἀνατίθενται, πυρὸς καὶ ὕδατος ἀλέκτοις φοραῖς. κατασκήπτειν δ' ἑκατέραν ἐν μέρει φασὶν ἐν πάνυ μακραῖς ἐτῶν περιόδοις. ὅταν μὲν οὖν ἐμπρησμὸς καταλαμβάνῃ, ῥεῦμ' αἰθερίου πυρὸς ἄνωθεν ἐκχεόμενον πολλαχῇ σκεδάννυσθαι μεγάλα κλίματα τῆς οἰκουμένης ἐπιτρέχον· ὅταν δὲ κατακλυσμὸς, ἅπασαν τὴν ὕδατος [κατομβρίαν] κατασύρειν φύσιν αὐθιγενῶν ποταμῶν καὶ χειμάρρων οὐ πλημμυρούντων μόνον, ἀλλὰ καὶ τὸ καθεστὸς προσυπερβαλλόντων τῆς ἐπιβάσεως καὶ τὰς ὄχθας ἢ τῇ βίᾳ παραρρηγνύντων ἢ ὑπερπηδόντων ἀναβάσει τῇ πρὸς μήκιστον ὕψος· ὅθεν ὑπερβλύσαντας εἰς τὴν παρακειμένην ἀναχεῖσθαι πεδιάδα, τὴν δὲ τὸ μὲν πρῶτον εἰς μεγάλας λίμνας διανέμεσθαι πρὸς τὰ κοιλότερα αἰε τοῦ ὕδατος συνίζοντος, αὐθις δ' ἐπιρρέοντος καὶ τοὺς μεθορίους ἰσθμούς κατακλύζοντος, οἷς διεκρίνοντο αἱ λίμναι, εἰς μέγεθος ἀχανοῦς πελάγους κατὰ τὴν πολλῶν ἔνωσιν ἀποκρίνεσθαι. πρὸς δὲ μαχομένων δυνάμεων ἐν μέρει τοὺς ἐν ἐναντίοις οἰκοῦντας τόποις ἀπόλλυσθαι, πυρὶ μὲν τοὺς ἐν ὄρεσι καὶ γεωλόφοις καὶ δυσύδροις χωρίοις ἅτ' οὐκ ἔχοντας φύσει πυρὸς ἀμυντήριον ἄφθονον ὕδωρ· ἔμπαλιν δ' ὕδατι τοὺς παρὰ ποταμοῖς ἢ λίμναις ἢ θαλάττῃ. γειτόνων γὰρ ἅπτεσθαι φιλεῖ τὰ κακὰ πρῶτων ἢ καὶ μόνων. κατὰ δὴ τοὺς λεχθέντας τρόπους δίχα μυρίων ἄλλων βραχυτέρων φθειρομένου τοῦ πλείστου μέρους ἀνθρώπων ἐπιλείπειν ἐξ ἀνάγκης καὶ τὰς τέχνας· δίχα γὰρ τοῦ μεθοδεύοντος οὐκ εἶναι καθ' αὐτὴν ἰδεῖν τὴν ἐπιστήμην. ἐπειδὴν δ' αἱ μὲν κοιναὶ νόσοι χαλάσωσιν, ἄρξῃται δ' ἀνηβᾶν καὶ βλαστάνειν τὸ γένος ἐκ τῶν μὴ προκαταληφθέντων τοῖς ἐπιβρίσασσι δεινοῖς, ἄρχεσθαι καὶ τὰς τέχνας πάλιν συνίστασθαι, οὐ τότε πρῶτον γενομένης, ἀλλὰ τῇ μειώσει τῶν ἐχόντων ὑποσπανισθείσας.

[13] Simplicius in Ar. de caelo p. 510a 41 Brand. 252b 40 Karsten

Δημόκριτος δέ, ὡς Θεόφραστος ἐν τοῖς Φυσικοῖς ἱστορεῖ, ὡς ἰδιωτικῶς ἀποδιδόντων τῶν κατὰ τὸ θερμὸν καὶ τὸ ψυχρὸν καὶ τὰ τοιαῦτα αἰτιολογούντων ἐπὶ τὰς ἀτόμους ἀνέβη.

[14] Galenus de elementis sec. Hippocratem I 9 vol. I p. 486 Kuehn.

Ὅσα γὰρ ἄλλα ταῖς ἀπαθῇ μὲν τὴν οὐσίαν ὑποτιθεμέναις αἰρέσεσι παραπλεκούσαις δὲ τὸ κενὸν ἐναντιοῦται τὰ μὲν ὑπὸ Ἀριστοτέλους τε καὶ Θεοφράστου λέλεκται, τὰ δὲ κτλ. [15] Simplicius in phys. f. 165r 4850.

Ἄδην οὖν καὶ τὸ τί ἐστίν, εἴπερ οἱ μὲν τὴν τοῦ ὄλου κίνησιν καὶ περιφορὰν τὸν χρόνον εἶναι φασιν, ὡς τὸν Πλάτωνα νομίζουσιν ὃ τε Εὐδήμιος καὶ ὁ Θεόφραστος καὶ ὁ Ἀλέξανδρος.

[16] Aëtius de Placitis II 20 4³ [p. 348, 10]

Ξενοφάνης ἐκ νεφῶν πεπτρωμένων εἶναι τὸν ἥλιον ... Θεόφραστος ἐν τοῖς Φυσικοῖς γέγραπεν, ἐκ πυριδίων τῶν συναθροιζομένων μὲν ἐκ τῆς ὑγρᾶς ἀναθυμιάσεως, συναθροιζόντων δὲ τὸν ἥλιον.

[17] Laertius Diogenes VIII 48

Τοῦτον (Pythagoram) ὁ Φαβωρίνός φησιν ... καὶ τὸν οὐρανὸν πρῶτον ὀνομάσαι κόσμον καὶ τὴν γῆν στρογγύλην· ὡς δὲ Θεόφραστος, Παρμενίδην.

[19] Aëtius de Plac. II 29 4⁷

Ἀναξαγόρας ὥς φησι Θεόφραστος (ἐκλείπειν τὴν σελήνην) καὶ τῶν ὑποκάτω τῆς σελήνης ἔσθ' ὅτε σωμάτων ἐπιπροσθούτων.

[20] Proclus in Tim. p. 138 Basil. 328 Schneid.

“Ἡ γὰρ μόνος ἢ μάλιστα Πλάτων τῇ ἀπὸ τοῦ προνοοῦντος αἰτία κατεχρήσατο” φησὶν ὁ Θεόφραστος τοῦτο γε καλῶς αὐτῷ μαρτυρῶν.

[21] Taurus ap. Philop. adv. Procl. XIII 15 (I 8 v)

Ὁ δημιουργὸς ἤρχετο τῆς συστάσεως τοῦ κόσμου ἐκ πυρὸς καὶ γῆς. δεῖ δὲ τὸ γενησόμενον σωματοειδὲς ἀντιτυπικὸν εἶναι καὶ ὁρατὸν ... Θεόφραστός φησιν ‘εἰ τὸ ὁρατὸν καὶ τὸ ἀπτόν ἐκ γῆς καὶ πυρὸς ἐστὶ, τὰ ἄστρα καὶ ὁ οὐρανὸς ἔσται ἐκ τούτων· οὐκ ἔστι δέ’. ταῦτα λέγει εἰσάγων τὸ πέμπτον σῶμα τὸ κυκλοφορητικόν. [22] Plutarchus quaest. Platon. VIII 4¹ p. 1006c

Θεόφραστος δὲ καὶ προσιστορεῖ τῷ Πλάτῳ πρεσβυτέρῳ γενομένῳ μεταμέλειν ὡς οὐ προσήκουσαν ἀποδόντι τῇ γῇ τὴν μέσην χώραν τοῦ παντός.

[23] Alexander in Meteora f. 91r vol. I 268 Id.

Οἱ μὲν γὰρ αὐτῶν (physicorum) ὑπόλειμμα λέγουσιν εἶναι τὴν θάλασσαν τῆς πρώτης ὑγρότητος· ὑγροῦ γὰρ ὄντος τοῦ περὶ τὴν γῆν τόπου τὰ πρῶτα τῆς ὑγρότητος ὑπὸ τοῦ ἡλίου ἐξατμίζεσθαι καὶ γίνεσθαι [τὰ] πνεύματά τε ἐξ αὐτοῦ καὶ τροπὰς ἡλίου τε καὶ σελήνης, ὡς διὰ τὰς ἀτμίδας ταύτας καὶ τὰς ἀναθυμιάσεις κάκείνων τὰς τροπὰς ποιουμένων, ἔνθα ἡ ταύτης αὐτοῖς χορηγία γίνεται περὶ ταῦτα τρεπομένων· τὸ δέ τι αὐτῆς ὑπολειφθὲν ἐν τοῖς κοίλοις τόποις θάλατταν εἶναι· διὸ καὶ ἐλάττω γίνεσθαι ξηρανομένην ἐκάστοτε ὑπὸ τοῦ ἡλίου καὶ τέλος ἔσεσθαι ποτε ξηράν. ταύτης τῆς δόξης ἐγένοντο, ὡς ἱστορεῖ ὁ Θεόφραστος, Ἀναξίμανδρός τε καὶ Διογένης. Διογένης δὲ καὶ τῆς ἀλμυρότητος ταύτην αἰτίαν λέγει, ὅτι ἀνάγοντος τοῦ ἡλίου τὸ

γλυκὸν τὸ καταλειπόμενον καὶ ὑπομένον ἄλμυρον εἶναι συμβαίνει. οἱ δὲ τινὲς φασιν οἶον ἰδρῶτά τινα τῆς γῆς εἶναι τὴν θάλασσαν· θερμαινομένην γὰρ αὐτὴν ὑπὸ τοῦ ἡλίου ταύτην ἀφιέναι τὴν ὑγρότητα· διὸ καὶ ἄλμυρὰν αὐτὴν εἶναι· τοιοῦτος γὰρ ὁ ἰδρώς· ταύτης τῆς δόξης Ἐμπεδοκλῆς γέγονε. τρίτη δὲ δόξα περὶ θαλάττης ἐστίν, ὥς ἄρα τὸ ὕδωρ τὸ διὰ τῆς γῆς διηθούμενον καὶ διαπλῦνον αὐτὴν ἄλμυρον γίνεται τῷ ἔχειν τὴν γῆν τοιούτους χυμοὺς ἐν αὐτῇ, οὓς σημεῖον ἐποιοῦντο τὸ καὶ ἄλας ὀρύττεσθαι ἐν αὐτῇ καὶ νίτρα, εἶναι δὲ καὶ ὀξεῖς χυμοὺς πολλαχοῦ τῆς γῆς. ταύτης πάλιν τῆς δόξης ἐγένοντο Ἀναξαγόρας τε καὶ Μητροδόωρος.

Characters

PROEM

[1] Ἦδη μὲν καὶ πρότερον πολλάκις ἐπιστήσας τὴν διάνοιαν ἐθαύμασα, ἴσως δὲ οὐδὲ παύσομαι θαυμάζων, τί γὰρ δήποτε, τῆς Ἑλλάδος ὑπὸ τὸν αὐτὸν ἀέρα κειμένης καὶ πάντων τῶν Ἑλλήνων ὁμοίως παιδευομένων, συμβέβηκεν ἡμῖν οὐ τὴν αὐτὴν τάξιν τῶν τρόπων ἔχειν. [2] ἐγὼ γάρ, ὦ Πολύκλεις, συνθεωρήσας ἐκ πολλοῦ χρόνου τὴν ἀνθρωπίνην φύσιν καὶ βεβιωκὼς ἔτη ἐνενήκοντα ἐννέα, ἔτι δὲ ὠμιληκὼς πολλαῖς τε καὶ παντοδαπαῖς φύσει καὶ παρατεθεαμένος ἐξ ἀκριβείας πολλῆς τοὺς τε ἀγαθοὺς τῶν ἀνθρώπων καὶ τοὺς φαύλους ὑπέλαβον δεῖν συγγράψαι, ἃ ἑκάτεροι αὐτῶν ἐπιτηδεύουσιν ἐν τῷ βίῳ. [3] ἐκθήσω δὲ σοι κατὰ γένος, ὅσα τε τυγχάνει γένη τρόπων τοῦτοις προσκείμενα καὶ ὃν τρόπον τῇ οἰκονομίᾳ χρῶνται· ὑπολαμβάνω γάρ, ὦ Πολύκλεις, τοὺς υἱεῖς ἡμῶν βελτίους ἔσεσθαι, καταλειφθέντων αὐτοῖς ὑπομνημάτων τοιούτων, οἷς παραδείγμασι χρώμενοι αἰρήσονται τοῖς εὐσχημονεστάτοις συνεῖναί τε καὶ ὀμιλεῖν, ὅπως μὴ καταδεέστεροι ὦσιν αὐτῶν. [4] τρέψομαι δὲ ἤδη ἐπὶ τὸν λόγον· σὸν δὲ παρακολουθεῖσαί τε [ὀρθῶς] καὶ εἰδῆσαι, εἰ ὀρθῶς λέγω. πρῶτον μὲν οὖν ποιήσομαι <τὸν λόγον ἀπὸ> τῶν τὴν εἰρωνεῖαν ἐξηλωκότων, ἀφείς τὸ προοιμιάζεσθαι καὶ πολλὰ περὶ τοῦ πράγματος λέγειν. [5] καὶ ἄρξομαι πρῶτον ἀπὸ τῆς εἰρωνείας καὶ ὀριοῦμαι αὐτήν, εἴθ' οὕτως τὸν εἴρωνα διέξειμι, ποῖός τις ἐστὶ καὶ εἰς τίνα τρόπον κατενήεκται· καὶ τὰ ἄλλα δὴ τῶν παθημάτων, ὥσπερ ὑπεθέμην, πειράσομαι κατὰ γένος φανερὰ καθιστάναι.]

ΕΙΡΩΝΕΙΑΣ Α΄

[1] Ἡ μὲν οὖν εἰρωνεΐα δόξειεν ἂν εἶναι, ὡς τύπῳ λαβεῖν, προσποιήσις ἐπὶ <τὸ> χεῖρον πράξεων καὶ λόγων, ὁ δὲ εἴρων τοιοῦτός τις, [2] οἷος προσελθὼν τοῖς ἐχθροῖς ἐθέλειν λαλεῖν, οὐ μισεῖν· καὶ ἐπαινεῖν παρόντας, οἷς ἐπέθετο λάθρα, καὶ τούτοις συλλυπεῖσθαι ἡττωμένοις· καὶ συγγνώμην δὲ ἔχειν τοῖς αὐτὸν κακῶς λέγουσι καὶ ἐπὶ <πᾶσι> τοῖς καθ' ἑαυτοῦ λεγομένοις. [3] καὶ πρὸς τοὺς ἀδικουμένους καὶ ἀγανακτοῦντας πράως διαλέγεσθαι· καὶ τοῖς ἐντυγχάνειν κατὰ σπουδὴν βουλομένοις προστάξει ἐπανελθεῖν. [4] καὶ μηδὲν ὧν πράττει ὁμολογήσαι, ἀλλὰ φῆσαι βουλευέσθαι καὶ προσποιήσασθαι ἄρτι παραγεγονέναι καὶ ὁπρὲς γενέσθαι [αὐτὸν] καὶ μαλακισθῆναι. [5] καὶ πρὸς τοὺς δανειζομένους καὶ ἐρανίζοντας εἰπεῖν ὡς οὐ πλουτεῖ· καὶ πωλῶν φῆσαι· ὡς οὐ πωλεῖ· καὶ μὴ πωλῶν φῆσαι πωλεῖν· καὶ ἀκούσας τι μὴ προσποιεῖσθαι, καὶ ἰδὼν φῆσαι μὴ ἑωρακέναί, καὶ ὁμολογήσας μὴ μεμνησθαι· καὶ τὰ μὲν σκέψεσθαι φάσκειν, τὰ δὲ οὐκ εἰδέναι, τὰ δὲ θαυμάζειν, τὰ δ' ἤδη ποτὲ καὶ αὐτὸς οὕτως διαλογίσασθαι. [6] καὶ τὸ ὅλον δεινὸς τῷ τοιούτῳ τρόπῳ τοῦ λόγου χρῆσθαι· Οὐ πιστεύω· Οὐχ ὑπολαμβάνω· Ἐκπλήττομαι· καὶ· Λέγεις αὐτὸν ἕτερον γεγονέναι· Καὶ μὴν οὐ ταῦτα πρὸς ἐμὲ διεξήει· Παράδοξόν μοι τὸ πρᾶγμα· Ἄλλω τινὶ λέγε· Ὅπως δὲ σοὶ ἀπιστήσω ἢ ἐκείνου καταγνῶ, ἀποροῦμαι· Ἄλλ' ὅρα, μὴ σὺ θᾶττον πιστεύεις. [7] [Τοιαύτας φωνὰς καὶ πλοκάς καὶ παλιλλογίας εὐρεῖν ἔστι τῶν εἰρώνων. τὰ δὲ τῶν ἡθῶν μὴ ἀπλᾶ ἀλλ' ἐπίβουλα φυλάττεσθαι μᾶλλον δεῖ ἢ τοὺς ἔχεις.]

ΚΟΛΑΚΕΙΑΣ Β΄

[1] Τὴν δὲ κολακεΐαν ὑπολάβοι ἂν τις ὁμιλίαν αἰσχρὰν εἶναι, συμφέρουσιν δὲ τῷ κολακεύοντι, τὸν δὲ κόλακα τοιοῦτόν τινα, [2] ὥστε ἅμα πορευόμενον εἰπεῖν· Ἐνθυμῇ, ὡς ἀποβλέπουσι πρὸς σὲ οἱ ἄνθρωποι; τοῦτο δὲ οὐθενὶ τῶν ἐν τῇ πόλει γίνεται πλὴν σοί· ἡὐδοκίμεις χθὲς ἐν τῇ στοᾷ· πλειόνων γὰρ ἢ τριάκοντα ἀνθρώπων καθημένων καὶ ἐμπεσόντος λόγου, τίς εἴη βέλτιστος, ἀπ' αὐτοῦ ἀρξαμένους πάντας ἐπὶ τὸ ὄνομα αὐτοῦ κατενεχθῆναι. [3] καὶ ἅμα τοιαῦτα λέγων ἀπὸ τοῦ ἱματίου ἀφελεῖν κροκύδα, καὶ ἐάν τι πρὸς τὸ τρίχωμα [τῆς κεφαλῆς] ὑπὸ πνεύματος προσενηχθῇ ἄχυρον, καρφολογῆσαι, καὶ ἐπιγέλασας δὲ εἰπεῖν· Ὁρᾷς; ὅτι δυεῖν σοι ἡμερῶν οὐκ ἐντετύχηκα, πολιῶν ἔσχηκας τὸν πώγωννα μεστόν, καίπερ εἴ τις καὶ ἄλλος πρὸς τὰ ἔτη ἔχεις μέλαιναν τὴν τρίχα. [4] καὶ λέγοντος δὲ αὐτοῦ τι τοὺς ἄλλους σιωπᾶν κελεῦσαι καὶ ἐπαινέσαι δὲ ἀκούοντος, καὶ ἐπισημήνασθαι δέ, εἰ παύεται, Ὁρθῶς, καὶ σκώψαντι ψυχρῶς ἐπιγέλασαι τό τε ἱμάτιον ὥσαι εἰς τὸ στόμα ὡς δὴ οὐ δυνάμενος κατασχεῖν τὸν γέλωτα. [5] καὶ τοὺς ἀπαντῶντας ἐπιστῆναι κελεῦσαι, ἕως ἂν αὐτὸς παρέλθῃ. [6] καὶ τοῖς παιδίοις μῆλα καὶ ἀπίους πριάμενος εἰσενέγκας δοῦναι ὀρῶντος αὐτοῦ, καὶ φιλήσας δὲ εἰπεῖν· Χρηστοῦ πατρὸς νεόττια. [7] καὶ συνωνούμενος ἐπικρηπῖδας τὸν πόδα φῆσαι εἶναι εὐρυθμότερον τοῦ ὑποδήματος. [8] καὶ πορευομένου πρὸς τινα τῶν φίλων προδραμῶν εἰπεῖν ὅτι Πρὸς σὲ ἔρχεται, καὶ ἀναστρέψας ὅτι Προσήγγελκά σε. [9] ἀμέλει δὲ καὶ τὰ ἐκ <τῆς> γυναικείας ἀγορᾶς διακονῆσαι δυνατὸς ἀπνευστί. [10] καὶ τῶν ἐστιωμένων πρῶτος ἐπαινέσαι τὸν οἶνον καὶ παραμένων εἰπεῖν· Ὡς μαλακῶς ἐσθίεις, καὶ ἄρας τι τῶν ἀπὸ τῆς τραπέζης φῆσαι· Τουτὶ ἄρα ὡς χρηστόν ἐστι· καὶ ἐρωτῆσαι, μὴ ῥίγοι, καὶ εἰ ἐπιβάλλεσθαι βούλεται, καὶ εἴ τι περιστείλῃ αὐτόν, καὶ μὴν ταῦτα λέγων πρὸς τὸ οὗς προσκύπτων διαψιθυρίζειν· καὶ εἰς ἐκεῖνον ἀποβλέπων τοῖς ἄλλοις λαλεῖν. [11] καὶ τοῦ παιδὸς ἐν τῷ θεάτρῳ ἀφελόμενος τὰ προσκεφάλαια αὐτὸς ὑποστρῶσαι. [12] καὶ τὴν οἰκίαν φῆσαι εὖ ἡρχιτεκτονῆσθαι καὶ τὸν ἀγρὸν εὖ πεφυτεῦσθαι καὶ τὴν εἰκόνα ὁμοίαν εἶναι.

[13] [καὶ τὸ κεφάλαιον τὸν κόλακα ἔστι θεάσασθαι πάντα καὶ λέγοντα καὶ πράττοντα, ᾧ χαριεῖσθαι ὑπολαμβάνει.]

ΑΔΟΛΕΣΧΙΑΣ Γ΄

[1] Ἡ δὲ ἀδολεσχία ἐστὶ μὲν διήγησις λόγων μακρῶν καὶ ἀπροβουλεύτων, ὁ δὲ ἀδολέσχης τοιοῦτός ἐστιν, [2] οἷος, ὃν μὴ γινώσκει, τούτῳ παρακαθεζόμενος πλησίον πρῶτον μὲν τῆς αὐτοῦ γυναικὸς εἰπεῖν ἐγκώμιον· εἶτα ὁ τῆς νυκτὸς εἶδεν ἐνύπνιον, τοῦτο διηγήσασθαι· εἴθ' ὧν εἶχεν ἐπὶ τῷ δεῖπνῳ, τὰ καθ' ἕκαστα διεξελθεῖν. [3] εἶτα δὴ προχωροῦντος τοῦ πράγματος λέγειν, ὥς πολὺ πονηρότεροί εἰσιν οἱ νῦν ἄνθρωποι τῶν ἀρχαίων, καὶ ὥς ἄξιοι γεγόνασιν οἱ πυροὶ ἐν τῇ ἀγορᾷ, καὶ ὥς πολλοὶ ἐπιδημοῦσι ξένοι, καὶ τὴν θάλατταν ἐκ Διονυσίων πλόϊμον εἶναι, καὶ εἰ ποιήσειεν ὁ Ζεὺς ὕδωρ πλεῖον, τὰ ἐν τῇ γῇ βελτίῳ ἔσεσθαι, καὶ ὁ ἀγρὸν εἰς νέωτα γεωργήσει, καὶ ὥς χαλεπὸν ἐστὶ τὸ ζῆν, καὶ ὥς Δάμιππος μυστηρίοις μεγίστην δᾶδα ἔστησεν, καὶ πόσοι εἰσὶ κίονες τοῦ Ὀιδείου, καὶ Χθὲς ἤμεσα, καὶ Τίς ἐστὶν ἡμέρα τήμερον; [4] κἂν ὑπομένη τις αὐτόν, μὴ ἀφίστασθαι, [καὶ] ὥς Βοηδρομιῶνος μὲν ἐστὶ τὰ μυστήρια, Πυανοσιῶνος δὲ τὰ πατούρια, Ποσιδεῶνος δὲ «τὰ» κατ' ἀγροὺς Διονύσια. [5] [Παρασείσαντα δὴ δεῖ τοὺς τοιούτους τῶν ἀνθρώπων καὶ διαράμενον ἀπαλλάττεσθαι, ὅστις ἀπύρευτος βούλεται εἶναι· ἔργον γὰρ συναρκεῖσθαι τοῖς μῆτε σχολὴν μῆτε σπουδὴν διαγινώσκουσιν.]

ΑΓΡΟΙΚΙΑΣ Δ΄

[1] Ἡ δὲ ἀγροικία δόξειεν ἂν εἶναι ἀμαθία ἀσχήμων, ὁ δὲ ἄγροικος τοιοῦτός τις, [2] οἷος κυκεῶνα πῶν εἰς ἐκκλησίαν πορεύεσθαι. [3] καὶ τὸ μύρον φάσκειν οὐδὲν τοῦ θύμου ἥδιον ὀζειν. [4] καὶ μείζω τοῦ ποδὸς τὰ ὑποδήματα φορεῖν. [5] καὶ μεγάλη τῇ φωνῇ λαλεῖν. [6] καὶ τοῖς μὲν φίλοις καὶ οἰκείοις ἀπιστεῖν, πρὸς δὲ τοὺς αὐτοῦ οἰκέτας ἀνακοινοῦσθαι περὶ τῶν μεγίστων, καὶ τοῖς παρ' αὐτῷ ἐργαζομένοις μισθωτοῖς ἐν ἀγρῷ πάντα τὰ ἀπὸ τῆς ἐκκλησίας διηγεῖσθαι. [7] καὶ ἀναβεβλημένος ἄνω τοῦ γόνατος καθιζάνειν, ὥστε τὰ γυμνὰ αὐτοῦ φαίνεσθαι. [8] καὶ ἐπ' ἄλλω μὲν μηδενὶ <μήτε ἐφίστασθαι> μήτε ἐκπλήττεσθαι ἐν ταῖς ὁδοῖς, ὅταν δὲ ἴδῃ βοῦν ἢ ὄνον ἢ τράγον, ἐστηκὼς θεωρεῖν. [9] καὶ προαιρῶν δέ τι ἐκ τοῦ ταμείου δεινὸς φαγεῖν, καὶ ζωρότερον πιεῖν. [10] καὶ τὴν σιτοποιὸν πειρῶν λαθεῖν, κἄτ' ἀλέσαι μετ' αὐτῆς τοῖς ἔνδον πᾶσι καὶ αὐτῷ τὰ ἐπιτήδεια. [11] καὶ ἀριστῶν δὲ ἅμα τοῖς ὑποζυγίοις ἐμβαλεῖν. [12] καὶ τὴν θύραν ὑπακοῦσαι αὐτός, καὶ τὸν κύνα προσκαλεσάμενος καὶ ἐπιλαβόμενος τοῦ ῥύγχους εἰπεῖν· Οὗτος φυλάττει τὸ χωρίον καὶ τὴν οἰκίαν. [13] καὶ τὸ ἀργύριον δὲ παρὰ τοῦ λαβὼν ἀποδοκιμάζειν, λίαν γὰρ λεπρὸν εἶναι, καὶ ἕτερον ἅμα ἀλλάττεσθαι. [14] καὶ εἰ τὸ ἄροτρον ἔχρησεν ἢ κόφινον ἢ δρέπανον ἢ θύλακον, <ἀπαιτῆσαι> ταῦτα τῆς νυκτὸς κατὰ ἀγρυπνίαν ἀναμνησκόμενος. [15] καὶ εἰς ἅστου καταβαίνων ἐρωτῆσαι τὸν ἀπαντῶντα, πόσου ἦσαν αἱ διφθέραι καὶ τὸ τάριχος καὶ εἰ τήμερον [ὁ ἀγὼν] νομηνίαν ἄγει, καὶ εἰπεῖν εὐθὺς ὅτι βούλεται καταβάς ἀποκείρασθαι καὶ ἐν βαλανείῳ δὲ ἴσσαι καὶ εἰς τὰ ὑποδήματα δὲ ἥλους ἐγκροῦσαι καὶ τῆς αὐτῆς ὁδοῦ παριῶν κομίσασθαι παρ' Ἀρχίου τοῦ τარიχους.

ΑΡΕΣΚΕΙΑΣ Ε΄

[1] Ἡ δὲ ἀρέσκειά ἐστι μὲν, ὡς ὄρω περιλαβεῖν, ἔντευξις οὐκ ἐπὶ τῷ βελτίστῳ ἡδονῆς παρασκευαστική, ὁ δὲ ἄρεσκος ἀμέλει τοιοῦτός τις, [2] οἷος πόρρωθεν προσαγορεύσας καὶ ἄνδρα κράτιστον εἰπὼν καὶ θαυμάσας ἱκανῶς, ἀμφοτέραις ταῖς χερσὶ λαβόμενος μὴ ἀφιέναι καὶ μικρὸν ἔτι προπέμψας καὶ ἐρωτήσας, πότε αὐτὸν ὄψεται, ἐπαινῶν ἀπαλλάττεσθαι. [3] καὶ παρακληθεὶς δὲ πρὸς δίαίταν μὴ μόνον ᾧ πάρεστι βούλεσθαι ἀρέσκειν, ἀλλὰ καὶ τῷ ἀντιδίκῳ, ἵνα κοινός τις εἶναι δοκῇ. [4] καὶ τοὺς ξένους δὲ εἰπεῖν ὡς δικαιοτέρα λέγουσι τῶν πολιτῶν. [5] καὶ κεκλημένος δὲ ἐπὶ δεῖπνον κελεύσαι καλέσαι τὰ παιδιά τὸν ἐστιῶντα, καὶ εἰσιόντα φῆσαι σύκου ὁμοιότερα εἶναι τῷ πατρί, καὶ προσαγόμενος φιλῆσαι καὶ παρ' αὐτὸν καθίστασθαι, καὶ τοῖς μὲν συμπαίζειν αὐτὸς λέγων· Ἀσκός, πέλεκυς, τὰ δὲ ἐπὶ τῆς γαστρὸς ἔαν καθεύδειν ἅμα θλιβόμενος. [6] καὶ πλειστάκις δὲ ἀποκείρασθαι καὶ τοὺς ὀδόντας λευκοὺς ἔχειν καὶ τὰ ἱμάτια δὲ χρηστὰ μεταβάλλεσθαι καὶ χρίσματι ἀλείφεσθαι. [7] καὶ τῆς μὲν ἀγορᾶς πρὸς τὰς τραπέζας προσφοιτᾶν, τῶν δὲ γυμνασίων ἐν τούτοις διατρίβειν, οὗ ἂν οἱ ἔφηβοι γυμνάζωνται, τοῦ δὲ θεάτρου καθῆσθαι, ὅταν ἦ ἡ θέα, πλησίον τῶν στρατηγῶν. [8] καὶ ἀγοράζειν αὐτῷ μὲν μηδέν, ξένοις δ' ἐκλάας· εἰς Βυζάντιον καὶ Λακωνικὰς κύνας εἰς Κύζικον καὶ μέλι Ὑμήττιον εἰς Ῥόδον, καὶ ταῦτα ποιῶν τοῖς ἐν τῇ πόλει διηγεῖσθαι. [9] ἀμέλει δὲ καὶ πίθηκον θρέψαι δεινὸς καὶ τίτυρον κτήσασθαι καὶ Σικελικὰς περιστερὰς καὶ δορκαδεῖους ἀστραγάλους καὶ Θουριακὰς τῶν στρογγύλων ληκύθους καὶ βακτηρίας τῶν σκολιῶν ἐκ Λακεδαιμόνος καὶ αὐλαίαν Πέρσας ἐνυφασμένην καὶ παλαιστρίδιον κόνιν ἔχον καὶ σφαιριστήριον. [10] καὶ τοῦτο περιῶν χρηρνύναι τοῖς φιλοσόφοις, τοῖς σοφισταῖς, τοῖς ὀπλομάχοις, τοῖς ἀρμονικοῖς ἐνεπιδείκνυσθαι· καὶ αὐτὸς ἐν ταῖς ἐπιδείξεσιν ὕστερον ἐπεισιέναι συγκαθημένων ἵν' εἴπῃ τις τῶν θεωμένων, ὅτι τούτου ἐστὶν ἡ παλαίστρα.

ΑΠΟΝΟΙΑΣ C'

[1] Ἡ δὲ ἀπόνοιά ἐστιν ὑπομονὴ αἰσχυρῶν ἔργων καὶ λόγων, ὁ δὲ ἀπονεννοημένος τοιοῦτός τις, [2] οἷος ὁμόσαι ταχύ, κακῶς ἀκοῦσαι, λοιδορηθῆναι δυναμένοις, τῷ ἦθει ἀγοραῖός τις καὶ ἀνασεσυρμένος καὶ παντοποιός. [3] ἀμέλει δυνατὸς καὶ ὀρχεῖσθαι νήφων τὸν κόρδακα κοῦ προσωπεῖον ἔχων ἐν κωμαστικῷ χορῷ. [4] καὶ ἐν θαύμασι δὲ τοὺς χαλκοὺς ἐκλέγειν καθ' ἕκαστον παριῶν καὶ μάχεσθαι τούτοις τοῖς τὸ σύμβολον φέρουσι καὶ προῖκα θεωρεῖν ἀξιούσι. [5] δεινὸς δὲ καὶ πανδοκεῦσαι καὶ πορνοβοσκῆσαι καὶ τελωνῆσαι καὶ μηδεμίαν αἰσχυρὰν ἐργασίαν ἀποδοκιμάσαι, ἀλλὰ κηρύττειν, μαγειρεύειν, κυβεύειν. [6] τὴν μητέρα μὴ τρέφειν, ἀπάγεσθαι κλοπῆς, τὸ δεσμωτήριον πλείω χρόνον οἰκεῖν ἢ τὴν αὐτοῦ οἰκίαν. [7] καὶ τούτων ἂν εἶναι δόξειε τῶν περισταμένων τοὺς ὄχλους καὶ προσκαλούντων, μεγάλη τῇ φωνῇ καὶ παρερρωγυῖα λοιδορουμένων καὶ διαλεγομένων πρὸς αὐτούς, - καὶ μεταξὺ οἱ μὲν προσίασιν, οἱ δὲ ἀπίασι πρὶν ἀκοῦσαι αὐτοῦ, ἀλλὰ τοῖς μὲν τὴν ἀρχήν, τοῖς δὲ συλλαβήν, τοῖς δὲ μέρος τοῦ πράγματος λέγει, οὐκ ἄλλως θεωρεῖσθαι ἀξιῶν τὴν ἀπόνοιαν αὐτοῦ, ἢ ὅταν ἡ πανήγυρις. [8] ἱκανὸς δὲ καὶ δίκας τὰς μὲν φεύγειν, τὰς δὲ διώκειν, τὰς δὲ ἐξόμνυσθαι, ταῖς δὲ παρεῖναι ἔχων ἐχῖνον ἐν τῷ προκολπίῳ καὶ ὀρμαθοὺς γραμματιδίων ἐν ταῖς χερσίν. [9] οὐκ ἀποδοκιμάζει δὲ οὐδ' ἅμα πολλῶν ἀγοραίων στρατηγεῖν καὶ εὐθὺς τούτοις δανείζειν καὶ τῆς δραχμῆς τόκον τρία ἡμιωβόλια τῆς ἡμέρας πράττεσθαι καὶ ἐφοδεύειν τὰ μαγειρεῖα, τὰ ἰχθυοπώλια, τὰ ταριχοπώλια, καὶ τοὺς τόκους ἀπὸ τοῦ ἐμπολήματος εἰς τὴν γνάθον ἐκλέγειν. [10] [Ἐργώδεις δὲ εἰσιν οἱ τὸ στόμα εὐλυτον ἔχοντες πρὸς λοιδορίαν καὶ φθεγγόμενοι μεγάλῃ τῇ φωνῇ, ὥς συνηγεῖν αὐτοῖς τὴν ἀγορὰν καὶ τὰ ἐργαστήρια.]

ΛΑΛΙΑΣ Ζ΄

[1] Ἡ δὲ λαλιά, εἴ τις αὐτὴν ὀρίζεσθαι βούλοιτο, εἶναι ἂν δόξειεν ἀκρασία τοῦ λόγου, ὃ δὲ λάλος τοιοῦτός τις, [2] οἷος τῷ ἐντυγχάνοντι εἰπεῖν, ἂν ὅτιοῦν πρὸς αὐτὸν φθέγγηται, ὅτι οὐθὲν λέγει καὶ ὅτι αὐτὸς πάντα οἶδεν καὶ, ἂν ἀκούῃ αὐτοῦ, μαθήσεται· καὶ μεταξὺ δὲ ἀποκρινομένων ἐπιβάλλειν εἶπας· Σὺ μὴ ἐπιλάθῃ, ὃ μέλλεις λέγειν, καὶ Εὗ γε, ὅτι με ὑπέμνησας, καὶ Τὸ λαλεῖν ὡς χρησίμὸν πού, καὶ Ὅ παρέλιπον, καὶ Ταχύ γε συνήκας τὸ πρᾶγμα, καὶ Πάλαι σε παρετήρουν, εἰ ἐπὶ τὸ αὐτὸ ἐμοὶ κατενεχθήσῃ· καὶ ἐτέρας ἀρχὰς τοιαύτας πορίσασθαι, ὥστε μὴδὲ ἀναπνεῦσαι τὸν ἐντυγχάνοντα. [3] καὶ ὅταν γε τοὺς καθ' ἓνα ἀπογυμνώσῃ, δεινὸς καὶ ἐπὶ τοὺς ἀθρόους [καὶ] συνεσθηκώτας πορευθῆναι καὶ φυγεῖν ποιῆσαι μεταξὺ χρηματίζοντας. [4] καὶ εἰς τὰ διδασκαλεῖα δὲ καὶ εἰς τὰς παλαιίστρας εἰσὼν κωλύειν τοὺς παῖδας προμανθάνειν· τοσαῦτα καὶ προσλαλεῖν τοῖς παιδοτρίβαις καὶ διδασκάλοις. [5] καὶ τοὺς ἀπιέναι φάσκοντας δεινὸς προπέμψαι καὶ ἀποκαταστῆσαι εἰς τὴν οἰκίαν. [6] καὶ πυθόμενος <τὰ ἀπὸ> τῆς ἐκκλησίας ἀπαγγέλλειν, προσδιηγῆσασθαι δὲ καὶ τὴν ἐπ' Ἀριστοφῶντος τότε γενομένην τῶν ῥητόρων μάχην [καὶ τὴν Λακεδαιμονίοις ὑπὸ Λυσάνδρου], καὶ οὕς ποτε λόγους αὐτὸς εἶπας εὐδοκίμησεν ἐν τῷ δήμῳ, καὶ κατὰ τῶν πληθῶν γε ἅμα διηγούμενος κατηγορίαν παρεμβαλεῖν, ὥστε τοὺς ἀκούοντας ἥτοι ἐπιλαθέσθαι ἢ νυστάξαι ἢ μεταξὺ καταλιπόντας ἀπαλλάττεσθαι. [7] καὶ συνδικάζων δὲ κωλύσαι κρῖναι καὶ συνθεωρῶν θεάσασθαι καὶ συνδαιπνῶν φαγεῖν λέγων, ὅτι χαλεπὸν τῷ λάλῳ ἐστὶ σιωπᾶν, καὶ ὡς ἐν ὑγρῷ ἐστὶν ἢ γλῶττα, καὶ ὅτι οὐκ ἂν σιωπήσειεν, οὐδ' εἰ τῶν χελιδόνων δόξειεν εἶναι λαλίστερος. [8] καὶ σκωπτόμενος ὑπομεῖναι καὶ ὑπὸ τῶν αὐτοῦ παιδίων, ὅταν αὐτὸν ἤδη καθεύδειν βουλόμενα κελεύῃ λέγειν· Τάτα, λαλεῖν τι ἡμῖν, ὅπως ἂν ἡμᾶς ὕπνος λάβῃ.

ΛΟΓΟΠΟΙΑΣ Η΄

[1] Ἡ δὲ λογοποιία ἐστὶ σύνθεσις ψευδῶν λόγων καὶ πράξεων, ὧν
«πιστεύεσθαι» βούλεται ὁ λογοποιῶν, ὁ δὲ λογοποιὸς τοιοῦτός τις, [2] οἷος
ἀπαντήσας τῷ φίλῳ εὐθὺς καταβαλὼν τὸ ἥθος καὶ μειδιάσας ἐρωτῆσαι·
Πόθεν σύ; καὶ Λέγεις τι; «τί» καὶ πῶς; Ἔχεις περὶ τοῦδε εἰπεῖν καινόν; καὶ ὥς
ἐπιβαλὼν ἐρωτᾷ· Μὴ λέγεται τι καινότερον; καὶ μὴν ἀγαθὰ γέ ἐστι τὰ
λεγόμενα. [3] καὶ οὐκ ἔασας ἀποκρίνασθαι εἰπεῖν· Τί λέγεις; οὐθὲν ἀκήκοας;
δοκῶ μοί σε εὐωχῆσιν καινῶν λόγων. [4] καὶ ἔστιν αὐτῷ ἡ στρατιώτης «τις» ἢ
παῖς Ἀστείου τοῦ αὐλητοῦ ἢ Λύκων ὁ ἐργολάβος παραγεγονῶς ἐξ αὐτῆς τῆς
μάχης, οὗ φασιν ἀκηκοέναι· αἱ μὲν οὖν ἀναφοραὶ τῶν λόγων τοιαῦταί εἰσιν
αὐτοῦ, ὧν οὐθὲς ἂν ἔχοι ἐπιλαβέσθαι. [5] διηγεῖται δὲ τούτους φάσκων λέγειν,
ὥς Πολυπέρχων καὶ ὁ βασιλεὺς μάχῃ νενίκηκε, καὶ Κάσανδρος ἐζώρηται. [6]
καὶ ἂν εἴπῃ τις αὐτῷ, Σὺ δὲ ταῦτα πιστεύεις; φήσῃ, τὸ πρᾶγμα βοᾷσθαι γὰρ ἐν
τῇ πόλει, καὶ τὸν λόγον ἐπεντείνειν, καὶ πάντα συμφωνεῖν, ταῦτα γὰρ λέγειν
περὶ τῆς μάχης, καὶ πολὺν τὸν ζῶμον γεγονέναι. [7] εἶναι δ' ἑαυτῷ καὶ σημεῖον
τὰ πρόσωπα τῶν ἐν τοῖς πράγμασιν· ὁρᾷ γὰρ αὐτῶν πάντων μεταβεβληκότα.
λέγει δ', ὥς καὶ παρακήκοε παρὰ τούτοις κρυπτόμενόν τινα ἐν οἰκίᾳ, ἥδη
πέμπτην ἡμέραν ἤκοντα ἐκ Μακεδονίας, ὃς πάντα ταῦτα οἶδε. [8] καὶ πάντα
διεξιὼν πῶς οἴεσθε πιθανῶς σχετλιάζει λέγων· Δυστυχῆς Κάσανδρος· ὦ
ταλαίπωρος· ἐνθυμῇ τὸ τῆς τύχης; ἄλλῳ οὖν ἰσχυρὸς γενόμενος; [9] καὶ Δεῖ
δ' αὐτόν σε μόνον εἰδέναι. πᾶσι δὲ τοῖς ἐν τῇ πόλει προσδεδράμηκε λέγων. [10]
[Τῶν τοιούτων ἀνθρώπων τεθαύμακα, τί ποτε βούλονται λογοποιοῦντες· οὐ
γὰρ μόνον ψεύδονται, ἀλλὰ καὶ ἀλύσιτελῶς ἀπαλλάττουσι. [11] πολλάκις γὰρ
αὐτῶν οἱ μὲν ἐν τοῖς βαλανείοις περιστάσεις ποιούμενοι τὰ ἱμάτια
ἀποβεβλήκασιν, οἱ δ' «ἐν» τῇ στοᾷ πεζομαχία καὶ ναυμαχία νικῶντες ἐρήμους
δίκας ὠφλήκασιν. [12] εἰσὶ δ' οἱ καὶ πόλεις τῷ λόγῳ κατὰ κράτος αἰροῦντες
παρεδειπνήθησαν. [13] πάννυ δὴ ταλαίπωρον αὐτῶν ἐστὶ τὸ ἐπιτήδευμα. ποία
γὰρ οὐ στοά, ποῖον δὲ ἐργαστήριον, ποῖον δὲ μέρος τῆς ἀγορᾶς, «οὐ» οὐ
διημερεύουσιν ἀπαυδᾶν ποιοῦντες τοὺς ἀκούοντας. [14] οὕτως καὶ
καταπονοῦσι ταῖς ψευδολογίαις.]

ΑΝΑΙΣΧΥΝΤΙΑΣ Θ΄

[1] Ἡ δὲ ἀναισχυντία ἐστὶ μὲν, ὡς ὄρω λαβεῖν, καταφρόνησις δόξης αἰσχροῦ ἔνεκα κέρδους, ὁ δὲ ἀναισχυντος τοιοῦτος, [2] οἷος πρῶτον μὲν ὄν ἀποστερεῖ πρὸς τοῦτον ἀπελθὼν δανεῖζεσθαι, εἴτα ... [3] «καὶ» θύσας τοῖς θεοῖς αὐτὸς μὲν δειπνεῖν παρ' ἐτέρῳ, τὰ δὲ κρέα ἀποτιθέναι ἅλσι πάσας, καὶ προσκαλεσάμενος τὸν ἀκόλουθον δοῦναι ἀπὸ τῆς τραπέζης ἄρας κρέας καὶ ἄρτον καὶ εἰπεῖν ἀκουόντων πάντων· Εὐωχοῦ, Τίβειε. [4] καὶ ὁψωνῶν δὲ ὑπομινῆσκειν τὸν κρεωπώλην, εἴ τι χρήσιμος αὐτῷ γέγονε, καὶ ἐστηκὼς πρὸς τῷ σταθμῷ μάλιστα μὲν κρέας, εἰ δὲ μή, ὅστουν εἰς τὸν ζωμὸν ἐμβαλεῖν, καὶ ἐὰν μὲν λάβῃ, εὖ ἔχει, εἰ δὲ μή, ἀρπάσας ἀπὸ τῆς τραπέζης χολίκιον ἅμα γελῶν ἀπαλλάττεσθαι. [5] καὶ ξένοις δὲ αὐτοῦ θέαν ἀγοράσας μὴ δοῦς τὸ μέρος θεωρεῖν, ἄγειν δὲ καὶ τοὺς «υἱεῖς» εἰς τὴν ὑστεραίαν καὶ τὸν παιδαγωγόν. [6] καὶ ὅσα ἐωνημένος ἄξιά τις φέρει, μεταδοῦναι κελεῦσαι καὶ αὐτῷ. [7] καὶ ἐπὶ τὴν ἄλλοτρίαν οἰκίαν ἐλθὼν δανεῖζεσθαι κριθάς, ποτὲ «δὲ» ἄχυρα, καὶ ταῦτα «τοὺς» χρήσαντας ἀναγκάσαι ἀποφέρειν πρὸς αὐτούς. [8] δεινὸς δὲ καὶ πρὸς τὰ χαλκεῖα τὰ ἐν τῷ βαλανείῳ προσελθὼν καὶ βάψας ἀρύταιναν βοῶντος τοῦ βαλανέως αὐτὸς αὐτοῦ καταχέασθαι καὶ εἰπεῖν, ὅτι λέλονται, ἀπιὼν «δὲ»· Κακίζεις; οὐδεμία σοι χάρις.

ΜΙΚΡΟΛΟΓΙΑΣ Ι'

[1] Ἔστι δὲ ἡ μικρολογία φειδωλία τοῦ διαφόρου ὑπὲρ τὸν καιρόν, ὁ δὲ μικρολόγος τοιοῦτός τις, [2] οἷος ἐν τῷ μηνὶ ἡμιωβόλιον ἀπαιτεῖν «ἐλθὼν» ἐπὶ τὴν οἰκίαν. [3] καὶ ὁμοσιτῶν ἀριθμεῖν τὰς κύλικας, πόσας ἕκαστος πέπωκε, καὶ ἀπάρχεσθαι ἐλάχιστον τῇ Ἀρτέμιδι τῶν συνδειπνούντων. [4] καὶ ὅσα μικροῦ τις πριάμενος λογίζεται, περιττὰ φάσκειν εἶναι. [5] καὶ οἰκέτου χύτραν ἔνῃν ἢ λοπάδα κατάξαντος εἰσπρᾶξαι ἀπὸ τῶν ἐπιτηδείων. [6] καὶ τῆς γυναικὸς ἐκβαλούσης τρίχαλκον οἷος μεταφέρειν τὰ σκεύη καὶ τὰς κλίνας καὶ τὰς κιβωτοὺς καὶ διφᾶν τὰ καλύμματα. [7] καὶ ἂν τι πωλῇ, τοσούτου ἀποδόσθαι, ὥστε μὴ λυσιτελεῖν τῷ πριαμένῳ. [8] καὶ οὐκ ἂν ἔᾶσαι οὔτε συκοτραγῆσαι ἐκ τοῦ αὐτοῦ κήπου οὔτε διὰ τοῦ αὐτοῦ ἀγροῦ πορευθῆναι οὔτε ἐλάαν ἢ φοίνικα τῶν χαμαὶ πεπτωκότων ἀνελέσθαι. [9] καὶ τοὺς ὄρους δ' ἐπισκοπεῖσθαι ὁσημέραι εἰ διαμένουσιν οἱ αὐτοί. [10] δεινὸς δὲ καὶ ὑπερημερίαν πρᾶξαι καὶ τόκον τόκου. [11] καὶ ἐστιῶν δημότας μικρὰ τὰ κρέα κόψας παραθεῖναι. [12] καὶ ὀψωνῶν μηθὲν πριάμενος εἰσελθεῖν. [13] καὶ ἀπαγορεῦσαι τῇ γυναικὶ μήτε ἄλλας χρηννύειν μήτε ἐλλύχνιον μήτε κύμινον μήτε ὀρίγανον μήτε ὀλὰς μήτε στέμματα μήτε θυηλήματα, ἀλλὰ λέγειν, ὅτι τὰ μικρὰ ταῦτα πολλὰ ἐστὶ τοῦ ἐνιαυτοῦ. [14] [καὶ τὸ ὅλον δὲ τῶν μικρολόγων καὶ τὰς ἀργυροθήκας ἔστιν ἰδεῖν εὐρωτιώσας καὶ τὰς κλεῖς ἰωμένας καὶ αὐτοὺς δὲ φοροῦντας ἐλάττω τῶν μηρῶν τὰ ἱμάτια καὶ ἐκ ληκυθίων μικρῶν πάνυ ἀλειφομένους καὶ ἐν χρῶ κειρομένους καὶ τὸ μέσον τῆς ἡμέρας ὑποδομένους καὶ πρὸς τοὺς γναφεῖς διατεινομένους, ὅπως τὸ ἱμάτιον αὐτοῖς ἔξει πολλὴν γῆν, ἵνα μὴ ῥυπαίνηται ταχύ.]

ΒΔΕΛΥΡΙΑΣ ΙΑ΄

[1] Οὐ χαλεπὸν δέ ἐστι τὴν βδελυρίαν διορίσασθαι· ἔστι γὰρ παιδιὰ ἐπιφανὴς καὶ ἐπονείδιστος, ὁ δὲ βδελυρὸς τοιοῦτος, [2] οἷος ἀπαντήσας γυναιξὶν ἐλευθέραις ἀνασυράμενος δεῖξαι τὸ αἰδοῖον. [3] καὶ ἐν θεάτρῳ κροτεῖν, ὅταν οἱ ἄλλοι παύωνται, καὶ συρίττειν, οὕς ἡδέως θεωροῦσιν οἱ λοιποί· καὶ ὅταν σιωπήσῃ τὸ θέατρον, ἀνακύψας ἐρυγεῖν, ἵνα τοὺς καθημένους ποιήσῃ μεταστραφῆναι. [4] καὶ πληθούσης τῆς ἀγορᾶς προσελθὼν πρὸς τὰ κάρνα ἢ τὰ μύρτα ἢ τὰ ἀκρόδρνα ἐστηκὼς τραγηματίζεσθαι, ἅμα τῷ πωλοῦντι προσλαλῶν· καὶ καλέσαι δὲ τῶν παρόντων ὀνομαστί τινα, ὃ μὴ συνήθης ἐστί· [5] καὶ σπεύδοντας δὲ ποι ὁρῶν «περιμεῖναι κελεῦσαι»· [6] καὶ ἡττωμένῳ δὲ μεγάλην δίκην ἀπιόντι ἀπὸ τοῦ δικαστηρίου προσελθεῖν καὶ συνησθῆναι. [7] καὶ ὀψωνεῖν ἑαυτῷ καὶ αὐλητρίδα μισθοῦσθαι καὶ δεικνύειν δὲ τοῖς ἀπαντῶσι τὰ ὀψωνημένα καὶ παρακαλεῖν ἐπὶ ταῦτα· [8] καὶ διηγεῖσθαι προσστὰς πρὸς κουρεῖον ἢ μυροπώλιον, ὅτι μεθύσκεσθαι μέλλει.

ΑΚΑΙΡΙΑΣ ΙΒ΄

[1] Ἡ μὲν οὖν ἀκαιρία ἐστὶν ἐπίτευξις <χρόνου> λυποῦσα τοὺς ἐντυγχάνοντας, ὁ δὲ ἄκαιρος τοιοῦτός τις, [2] οἷος ἀσχολουμένῳ προσελθὼν ἀνακοινοῦσθαι. [3] καὶ πρὸς τὴν αὐτοῦ ἐρωμένην κωμάζειν πυρέττουσαν. [4] καὶ δίκην ὠφληκότεν ἐγγύης προσελθὼν κελεῦσαι αὐτὸν ἀναδέξασθαι. [5] καὶ μαρτυρήσων παρεῖναι τοῦ πράγματος ἤδη κεκριμένου. [6] καὶ κεκλημένος εἰς γάμους τοῦ γυναικείου γένους κατηγορεῖν. [7] καὶ ἐκ μακρᾶς ὁδοῦ ἦκοντα ἄρτι παρακαλεῖν εἰς περίπατον. [8] δεινὸς δὲ καὶ προσάγειν ὠνητὴν πλείῳ διδόντα ἤδη πεπρακότι. [9] καὶ ἀκηκοότας καὶ μεμαθηκότας ἀνίστασθαι ἐξ ἀρχῆς διδάσκων. [10] καὶ προθύμως δὲ ἐπιμεληθῆναι, ἃ μὴ βούλεται τις γενέσθαι, αἰσχύνεται δὲ ἀπείπασθαι. [11] καὶ θύοντας καὶ ἀναλίσκοντας ἥκειν τόκον ἀπαιτήσων. [12] καὶ μαστιγουμένου οἰκέτου παρεστὼς διηγεῖσθαι, ὅτι καὶ αὐτοῦ ποτε παῖς οὕτως πληγὰς λαβὼν ἀπήγξατο. [13] καὶ παρὼν διαίτη συγκρούειν, ἀμφοτέρων βουλομένων διαλύεσθαι. [14] καὶ ὀρχησόμενος ἄψασθαι ἐτέρου μηδέπω μεθύοντος.

ΠΕΡΙΕΡΓΙΑΣ ΙΓ΄

[1] Ἀμέλει <ή> περιεργία δόξει εἶναι προσποίησις τις λόγων καὶ πράξεων μετὰ εὐνοίας, ὁ δὲ περίεργος τοιοῦτός τις, [2] <οἷος> ἐπαγγέλλεσθαι ἀναστάς, ἃ μὴ δυνήσεται. [3] καὶ ὁμολογουμένου τοῦ πράγματος δικαίου εἶναι ἐντείνας ἐλεγχθῆναι. [4] καὶ πλείω δὲ ἐπαναγκάσαι τὸν παῖδα κεράσαι, ἢ ὅσα δύνανται οἱ παρόντες ἐκπιεῖν. [5] καὶ διείργειν τοὺς μαχομένους, καὶ οὓς οὐ γινώσκει. [6] καὶ ἀτραποῦ ἡγήσασθαι, εἴτα μὴ δύνασθαι εὐρεῖν, οὗ πορεύεται. [7] καὶ τὸν στρατηγὸν προσελθὼν ἐρωτῆσαι, πότε μέλλει παρατάττεσθαι, καὶ τί μετὰ τὴν αὔριον παραγγελεῖ. [8] καὶ προσελθὼν τῷ πατρὶ εἰπεῖν, ὅτι ἡ μήτηρ ἤδη καθεύδει ἐν τῷ δωματίῳ. [9] καὶ ἀπαγορεύοντος τοῦ ἱατροῦ, ὅπως μὴ δώσει οἶνον τῷ μαλακίζομένῳ, φήσας βούλεσθαι διάπειραν λαμβάνειν, εὗ ποτίσαι τὸν κακῶς ἔχοντα. [10] καὶ γυναικὸς δὲ τελευτησάσης ἐπιγράψαι ἐπὶ τὸ μνήμα τοῦ τε ἀνδρὸς αὐτῆς καὶ τοῦ πατρὸς καὶ τῆς μητρὸς καὶ αὐτῆς τῆς γυναικὸς τοῦνομα καὶ ποδαπὴ ἐστὶ, καὶ προσεπιγράψαι, ὅτι οὗτοι πάντες χρηστοὶ ἦσαν. [11] καὶ ὁμνῦναι μέλλων εἰπεῖν πρὸς τοὺς περιεστηκότας, ὅτι Καὶ πρότερον πολλάκις ὁμώμοκα.

ΑΝΑΙΣΘΗΣΙΑΣ ΙΔ΄

[1] Ἔστι δὲ ἡ ἀναισθησία, ὡς ὄρω εἰπεῖν, βραδυτῆς ψυχῆς ἐν λόγοις καὶ πράξεσιν, ὁ δὲ ἀναίσθητος τοιοῦτός τις, [2] οἷος λογισάμενος ταῖς ψήφοις καὶ κεφάλαιον ποιήσας ἐρωτᾷ τὸν παρακαθήμενον· Τί γίνεται; [3] καὶ δίκην φεύγων καὶ ταύτην εἰσιέναι μέλλον ἐπιλαθόμενος εἰς ἀγρὸν πορεύεσθαι. [4] καὶ θεωρῶν ἐν τῷ θεάτρῳ μόνος καταλείπεσθαι καθεύδων. [5] καὶ πολλὰ φαγὼν καὶ τῆς νυκτὸς ἐπὶ θάκου ἀνιστάμενος ἀποπλανώμενος ὑπὸ κυνὸς τῆς τοῦ γείτονος δηχθῆναι. [6] καὶ λαβὼν <τι> καὶ ἀποθεῖς αὐτός, τοῦτο ζητεῖν καὶ μὴ δύνασθαι εὑρεῖν. [7] καὶ ἀπαγγέλλοντος αὐτῷ, ὅτι τετελεύτηκέ τις αὐτοῦ τῶν φίλων, ἵνα παραγένηται, σκυθρωπάσας καὶ δακρύσας εἰπεῖν· Ἀγαθὴ τύχη. [8] δεινὸς δὲ καὶ ἀπολαμβάνων ἀργύριον ὀφειλόμενον μάρτυρας παραλαβεῖν. [9] καὶ χειμῶνος ὄντος μάχεσθαι τῷ παιδί, ὅτι σικύους οὐκ ἠγόρασεν. [10] καὶ τὰ παιδιά ἑαυτοῖς παλαίειν ἀναγκάζων καὶ τροχάζειν [καὶ] εἰς κόπους ἐμβάλλειν. [11] καὶ ἐν ἀγρῷ αὐτὸς φακῆν ἔψων δις ἄλας εἰς τὴν χύτραν ἐμβαλὼν ἄβρωτον ποιῆσαι. [12] καὶ ὕοντος τοῦ Διὸς εἰπεῖν· ᾤδὺ γε τῶν ἄστρων νομίζει, ὅτι δὴ καὶ οἱ ἄλλοι λέγουσι πίσσης † [13] καὶ λέγοντός τινος· Πόσους οἶε κατὰ τὰς Ἱερὰς πύλας ἐξενηνέχθαι νεκρούς; πρὸς τοῦτον εἰπεῖν· Ὅσοι ἐμοὶ καὶ σοὶ γένοιτο.

ΑΥΘΑΔΕΙΑΣ ΙΕ΄

[1] Ἡ δὲ αὐθάδειά ἐστιν ἀπήνεια ὁμιλίας ἐν λόγοις, ὁ δὲ αὐθάδης τοιοῦτός τις, [2] οἷος ἐρωτηθεὶς· Ὁ δεῖνα ποῦ ἐστιν; εἰπεῖν· Πράγματά μοι μὴ πάρεχε. [3] καὶ προσαγορευθεὶς μὴ ἀντιπροσειπεῖν. [4] <καὶ> πωλῶν τι μὴ λέγειν τοῖς ὠνουμένοις, πόσου ἂν ἀποδοῖτο, ἀλλ' ἐρωτᾶν· Τί εὕρισκει; [5] καὶ τοῖς τιμῶσι καὶ πέμπουσιν εἰς τὰς ἐορτὰς εἰπεῖν, ὅτι οὐκ ἂν γένοιτο διδόμενα <τὰ ἀποδιδόμενα>. [6] καὶ οὐκ ἔχειν συγγνώμην οὔτε τῷ ῥυπώσαντι αὐτὸν ἀκουσίως οὔτε τῷ ὥσαντι οὔτε τῷ ἐμβάντι. [7] καὶ φίλῳ δὲ ἔρανον κελεύσαντι εἰσενεγκεῖν εἰπών, ὅτι οὐκ ἂν δοίῃ, ὕστερον ἤκειν φέρων καὶ λέγειν, ὅτι ἀπόλλυσι καὶ τοῦτο τὸ ἀργύριον. [8] καὶ προσπταίσας ἐν τῇ ὁδῷ δεινὸς καταράσασθαι τῷ λίθῳ. [9] καὶ ἀναμεῖναι οὐκ ἂν ὑπομεῖναι πολὺν χρόνον οὐθένα. [10] καὶ οὔτε ἄσαι οὔτε ῥῆσιν εἰπεῖν οὔτε ὀρχήσασθαι ἂν ἐθελήσειεν· [11] δεινὸς δὲ καὶ τοῖς θεοῖς μὴ ἐπεύχεσθαι.

ΔΕΙΣΙΔΑΙΜΟΝΙΑΣ ΙC´

[1] Ἀμέλει ἡ δεισιδαιμονία δόξειεν ἄν' εἶναι δειλία πρὸς τὸ δαιμόνιον, ὃ δὲ δεισιδαίμων τοιοῦτός τις, [2] οἷος ἐπιτυχὼν ἐκφορᾷ ἀπονιψάμενος τὰς χεῖρας καὶ περιρρανάμενος ἀπὸ ἱεροῦ δάφνην εἰς τὸ στόμα λαβὼν οὕτω τὴν ἡμέραν περιπατεῖν. [3] καὶ τὴν ὁδὸν ἐὰν ὑπερδράμῃ γαλῇ, μὴ πρότερον πορευθῆναι, ἕως διεξέλθῃ τις ἢ λίθους τρεῖς ὑπὲρ τῆς ὁδοῦ διαβάλλῃ. [4] καὶ ἐὰν ἴδῃ ὄφιν ἐν τῇ οἰκίᾳ, ἐὰν παρείαν, Σαβάζιον καλεῖν, ἐὰν δὲ ἱερόν, ἐνταῦθα ἡρῶν εὐθὺς ἰδρύσασθαι. [5] καὶ τῶν λιπαρῶν λίθων τῶν ἐν ταῖς τριόδοις παριῶν ἐκ τῆς ληκύθου ἔλαιον καταχεῖν καὶ ἐπὶ γόνατα πεσὼν καὶ προσκυνήσας ἀπαλλάττεσθαι. [6] καὶ ἐὰν μῦς θύλακον ἀλφίτων διαφάγῃ, πρὸς τὸν ἐξηγητὴν ἐλθὼν ἐρωτᾷν, τί χρὴ ποιεῖν, καὶ ἐὰν ἀποκρίνηται αὐτῷ ἐκδοῦναι τῷ σκυτοδέσῃ ἐπιρράψαι, μὴ προσέχειν τούτοις, ἀλλ' ἀποτραπείς ἐκθύσασθαι. [7] καὶ πυκνὰ δὲ τὴν οἰκίαν καθᾶραι δεινὸς Ἑκάτης φάσκων ἐπαγωγὴν γεγονέναι. [8] κἂν γλαῦκες βαδίζοντος αὐτοῦ ταράττωνται, [καὶ] εἴπας· Ἀθηνᾶ κρείττων, παρελθεῖν οὕτω. [9] καὶ οὔτε ἐπιβῆναι μνήματι οὔτ' ἐπὶ νεκρὸν οὔτ' ἐπὶ λεχῶ ἐλθεῖν ἐθελῆσαι, ἀλλὰ τὸ μὴ μιάινεσθαι συμφέρον αὐτῷ φῆσαι εἶναι. [10] καὶ ταῖς τετράσι δὲ καὶ ἐβδόμαις προστάξας οἶνον ἔψειν τοῖς ἔνδον, ἐξελθὼν ἀγοράσαι μυρσίνας, λιβανωτόν, πόπανα καὶ εἰσελθὼν εἴσω στεφανοῦν τοὺς Ἑρμᾶς, ἀφρονεῖν ὅλην τὴν ἡμέραν. [11] καὶ ὅταν ἐνύπνιον ἴδῃ, πορεύεσθαι πρὸς τοὺς ὄνειροκρίτας, πρὸς τοὺς μάντις, πρὸς τοὺς ὀρνιθοσκόπους, ἐρωτήσων, τίνοι θεῶν - ἢ θεᾶ - προσεύχεσθαι δεῖ. [11a] καὶ τελεσθισόμενος πρὸς τοὺς Ὀρφεοτελεστὰς κατὰ μῆνα πορεύεσθαι μετὰ τῆς γυναικός - ἐὰν δὲ μὴ σχολάζῃ ἢ γυνή, μετὰ τῆς τίτθης - καὶ τῶν παιδίων. [12] καὶ τῶν περιρρανομένων ἐπὶ θαλάττης ἐπιμελῶς δόξειεν ἂν εἶναι. [13] κἂν ποτε ἐπίδῃ σκορόδῳ ἐστεμμένον τῶν ἐπὶ ταῖς τριόδοις, ἀπελθὼν κατὰ κεφαλῆς λούσασθαι καὶ ἱερείας καλέσας σκίλλῃ ἢ σκύλακι κελεῦσαι αὐτὸν περικαθᾶραι. [14] μαίνόμενον δὲ ἰδὼν ἢ ἐπίληπτον φρίζας εἰς κόλπον πτύσαι.

ΜΕΜΨΙΜΟΙΡΙΑΣ ΙΖ΄

[1] Ἦστί δὲ ἡ μεμψιμοιρία ἐπιτίμησις παρὰ τὸ προσῆκον τῶν δεδομένων, ὁ δὲ μεμψίμοιρος τοιόσδε τις, [2] οἷος ἀποστείλαντος μερίδα τοῦ φίλου εἰπεῖν πρὸς τὸν φέροντα· Ἐφθόνησάς μοι τοῦ ζωμοῦ καὶ τοῦ οἰναρίου οὐκ ἐπὶ δεῖπνον καλέσας. [3] καὶ ὑπὸ τῆς ἐταίρας καταφιλούμενος εἰπεῖν· Θαυμάζω, εἰ σὺ καὶ ἀπὸ τῆς ψυχῆς οὕτω με φιλεῖς. [4] καὶ τῷ Διὶ ἀγανακτεῖν, οὐ διότι ὕει, ἀλλὰ διότι ὕστερον. [5] καὶ εὐρών ἐν τῇ ὁδῷ βαλλάντιόν τι εἰπεῖν· Ἄλλ' οὐ θησαυρὸν εὔρηκα οὐδέποτε. [6] καὶ πριάμενος ἀνδράποδον ἄξιον καὶ πολλὰ δεηθεὶς τοῦ πωλοῦντος· Θαυμάζω, εἰπεῖν, ὅ τι ὑγιὲς οὕτω ἄξιον ἐώνημαι. [7] καὶ πρὸς τὸν εὐαγγελιζόμενον, ὅτι Υἱός σοι γέγονεν, εἰπεῖν, ὅτι Ἄν προσθῇς· καὶ τῆς οὐσίας τὸ ἥμισυ ἄπεστιν, ἀληθῆ ἔρεῖς. [8] καὶ δίκην νικήσας καὶ λαβὼν πάσας τὰς ψήφους ἐγκαλεῖν τῷ γράψαντι τὸν λόγον ὥς πολλὰ παραλελοιπότι τῶν δικαίων. [9] καὶ ἐράνου εἰσενεχθέντος παρὰ τῶν φίλων καὶ φήσαντός τινος· Ἰλαρὸς ἴσθι, Καὶ πῶς; εἰπεῖν, Ὅτι δεῖ τὰργύριον ἀποδοῦναι ἐκάστῳ καὶ χωρὶς τούτων χάριν ὀφείλειν ὥς εὐεργετημένον;

ΑΠΙΣΤΙΑΣ ΙΗ΄

[1] Ἔστιν ἀμέλει <ἡ> ἀπιστία ὑπόληψίς τις ἀδικίας κατὰ πάντων, ὁ δὲ ἄπιστος τοιοῦτός τις, [2] οἷος ἀποστείλας τὸν παῖδα ὀψωνήσοντα ἕτερον παῖδα πέμπειν τὸν πευσόμενον, πόσου ἐπρίατο. [3] καὶ φέρειν αὐτὸς τὸ ἀργύριον καὶ κατὰ στάδιον καθίζων ἀριθμεῖν, πόσον ἐστί. [4] καὶ τὴν γυναῖκα τὴν αὐτοῦ ἐρωτᾷ κατακείμενος, εἰ κέκλεικε τὴν κιβωτόν, καὶ εἰ σεσήμανται τὸ κυλιούχιον, καὶ εἰ ὁ μοχλὸς εἰς τὴν θύραν τὴν αὐλείαν ἐμβέβληται, καὶ ἂν ἐκείνη φῇ, μηδὲν ἤττον αὐτὸς ἀναστὰς γυμνὸς ἐκ τῶν στρωμάτων καὶ ἀνυπόδητος τὸν λύχνον ἄψας ταῦτα πάντα περιδραμὼν ἐπισκέψασθαι καὶ οὕτω μόλις ὕπνου τυγχάνειν. [5] καὶ τοὺς ὀφείλοντας αὐτῷ ἀργύριον μετὰ μαρτύρων ἀπαιτεῖν τοὺς τόκους, ὅπως μὴ δύναιντο ἔξαρνοι γενέσθαι. [6] καὶ τὸ ἱμάτιον δὲ ἐκδοῦναι δεινὸς οὐχ ὅς βέλτιστα ἐργάσεται, ἀλλ' ὅταν ᾗ ἄξιος ἐγγυητὴς τοῦ κναφέως. [7] καὶ ὅταν ἦκη τις αἰτησόμενος ἐκπώματα, μάλιστα μὲν μὴ δοῦναι, ἂν δ' ἄρα τις οἰκεῖος ἢ καὶ ἀναγκαῖος, μόνον οὐ πυρώσας καὶ στήσας καὶ σχεδὸν ἐγγυητὴν λαβὼν χρήσαι. [8] καὶ τὸν παῖδα δὲ ἀκολουθοῦντα κελεύειν αὐτοῦ ὀπισθεν μὴ βαδίζειν, ἀλλ' ἔμπροσθεν, ἵνα φυλάττῃ αὐτόν, μὴ ἐν τῇ ὁδῷ ἀποδράσῃ. [9] καὶ τοῖς εἰληφόσι τι παρ' αὐτοῦ καὶ λέγουσι· Πόσου, κατάθου, οὐ γὰρ σχολάζω πω, <εἰπεῖν>· Πέμπειν μηδὲν πραγματεύου· ἐγὼ γάρ, <ἔως> ἂν σὺ σχολάσῃς, συνακολουθήσω.

ΔΥΣΧΕΡΕΙΑΣ ΙΘ΄

[1] Ὡςτις δὲ ἡ δυσχέρεια ἀθεραπευσία σώματος λύπης παρασκευαστική, ὁ δὲ δυσχερὴς τοιοῦτός τις, [2] οἷος λέπραν ἔχων καὶ ἀλφὸν καὶ τοὺς ὄνυχας μεγάλους περιπατεῖν καὶ φῆσαι ταῦτα εἶναι αὐτῷ συγγενικά ἀρρωστήματα· ἔχειν γὰρ αὐτὸν καὶ τὸν πατέρα καὶ τὸν πάππον, καὶ οὐκ εἶναι ῥάδιον αὐτῶν εἰς τὸ γένος ὑποβάλλεσθαι. [3] ἀμέλει δὲ δεινὸς καὶ ἔλκη ἔχειν ἐν τοῖς ἀντικνημίοις καὶ προσπταίσματα ἐν τοῖς δακτύλοις καὶ μὴ θεραπεῦσαι ἀλλ’ ἐᾶσαι θηριωθῆναι· καὶ τὰς μασχάλας δὲ θηριώδεις καὶ δασείας ἔχειν ἄχρι ἐπὶ πολὺ τῶν πλευρῶν καὶ τοὺς ὀδόντας μέλανας καὶ ἐσθιομένους ὥστε δυσέντευκτος εἶναι καὶ ἀηδής. [4] καὶ τὰ τοιαῦτα· ἐσθίων ἀπομύττεσθαι· θύων ἅμ’ ἀδαξᾶσθαι· προσλαλῶν ἀπορρίπτειν ἀπὸ τοῦ στόματος· ἅμα πιὼν προσερυγγάνειν. [5] ἐν ἀνίπτοις τοῖς στρώμασι μετὰ τῆς γυναικὸς [αὐτοῦ] κοιμᾶσθαι. [6] ἐλαίῳ σαπρῷ ἐν βαλανείῳ χρώμενος σφύζεσθαι. [7] καὶ χιτωνίσκον παχὺν καὶ ἱμάτιον σφόδρα λεπτὸν καὶ κηλίδων μεστὸν ἀναβαλλόμενος εἰς ἀγορὰν ἐξελθεῖν. [8] καὶ εἰς ὀρνιθοσκόπου τῆς μητρὸς ἐξελθούσης βλασφημῆσαι. [9] καὶ εὐχομένων καὶ σπενδόντων ἐκβαλεῖν τὸ ποτήριον καὶ γελάσαι ὡς τεράστιόν τι πεποικώς· [10] καὶ αὐλούμενος δὲ κροτῆσαι ταῖς χερσὶ μόνος τῶν ἄλλων καὶ συντερετίζειν καὶ ἐπιτιμᾶν τῇ αὐλητρίδι, τί οὕτω ταχὺ ἐπαύσατο· [11] καὶ ἀποπτύσαι δὲ βουλόμενος, ὑπὲρ τῆς τραπέζης προσπτύσαι τῷ οἰνοχόῳ.

ΑΗΔΙΑΣ Κ΄

[1] Ἦστί δὲ ἡ ἀηδία, ὡς ὄρω περιλαβεῖν, ἔντευξις λύπης ποιητικὴ ἄνευ βλάβης, ὁ δὲ ἀηδὴς τοιοῦτός τις, [2] οἷος ἐγείρειν ἄρτι καθεύδοντα εἰσελθόν, ἵνα αὐτῷ λαλῇ. [3] καὶ ἀνάγεσθαι δὴ μέλλοντας κωλύειν. [4] καὶ προσελθόντων δεῖσθαι ἐπισχεῖν, ἕως ἂν περιπατήσῃ. [5] καὶ τὸ παιδίον τῆς τίτθης ἀφελόμενος, μασώμενος σιτίζειν αὐτὸς καὶ ὑποκορίζεσθαι πομπύζων καὶ πανουργημάτων τοῦ πάππου καλῶν. [6] καὶ ἐσθίων δὲ ἅμα διηγῆσθαι, ὡς ἐλλέβορον πιὼν ἄνω καὶ κάτω καθαρθεῖν καὶ ζωμοῦ τοῦ παρακειμένου ἐν τοῖς ὑποχωρήμασιν αὐτῷ μελαντέρα <εῖν> ἢ χολή. [7] καὶ ἐρωτῆσαι δὲ δεινὸς ἐναντίον τῶν οἰκείων· Εἴπ', ὦ μάμμη, ὅτ' ὠδινες καὶ ἔτικτές με, τίς ἡμέρα; [8] καὶ ὑπὲρ αὐτοῦ δὲ λέγειν, ὡς ἡδύς ἐστι καὶ <ἀηδής>, ἀμφοτέρα δὲ οὐκ ἔχοντα οὐ ῥάδιον ἄνθρωπον λαβεῖν, [9] καὶ ὅτι ψυχρὸν ὕδωρ ἐστὶ παρ' αὐτῷ λακκαῖον, καὶ ὡς κῆπος λάχανα πολλὰ ἔχων καὶ ἀπαλὰ [ὥστε εἶναι ψυχρὸν] καὶ μάγειρος εὖ τὸ ὄψον σκευάζων, καὶ ὅτι ἡ οἰκία αὐτοῦ πανδοκεῖόν ἐστι - μεστὴ γὰρ ἀεὶ - καὶ τοὺς φίλους αὐτοῦ εἶναι τὸν τετρημένον πίθον· εὖ ποιῶν γὰρ αὐτοὺς οὐ δύνασθαι ἐμπλῆσαι. [10] καὶ ξενίζων δὲ δεῖξαι τὸν παράσιτον αὐτοῦ ποῖός τις ἐστὶ τῷ συνδειπνοῦντι· καὶ παρακαλῶν δὲ ἐπὶ τοῦ ποτηρίου εἰπεῖν, ὅτι τὸ τέρψον τοὺς παρόντας παρεσκεύασται, καὶ ὅτι αὐτήν, ἐὰν κελεύσωσιν, ὁ παῖς μέτεισι παρὰ τοῦ πορνοβοσκοῦ ἤδη, ὅπως πάντες ὑπ' αὐτῆς αὐλώμεθα καὶ εὐφραινώμεθα.

ΜΙΚΡΟΦΙΛΟΤΙΜΙΑΣ ΚΑ΄

[1] Ἡ δὲ μικροφιλοτιμία δόξει εἶναι ὄρεξις τιμῆς ἀνελεύθερος, ὁ δὲ μικροφιλότητιμος τοιοῦτός τις, [2] οἷος σπουδάσαι ἐπὶ δεῖπνον κληθεὶς παρ' αὐτὸν τὸν καλέσαντα κατακείμενος δειπνῆσαι. [3] καὶ τὸν υἱὸν ἀποκεῖραι ἀπαγαγὼν εἰς Δελφοὺς, [4] καὶ ἐπιμεληθῆναι δέ, ὅπως αὐτῷ ὁ ἀκόλουθος Αἰθίοψ ἔσται. [5] καὶ ἀποδιδούς μνᾶν ἀργυρίου καινὸν ποιῆσαι ἀποδοῦναι. [6] καὶ κολοῖφ δὲ ἔνδον τρεφομένῳ δεινὸς κλιμάκιον πρίασθαι καὶ ἀσπίδιον χαλκοῦν ποιῆσαι, ὃ ἔχων ἐπὶ τοῦ κλιμακίου ὁ κολοῖος πηδήσεται. [7] καὶ βοῦν θύσας τὸ προμετωπίδιον ἀπαντικρὺ τῆς εἰσόδου προσπατταλεῦσαι στέμμασι μεγάλοις περιδήσας, ὅπως οἱ εἰσιόντες ἴδωσιν, ὅτι βοῦν ἔθυσσε. [8] καὶ πομπεύσας δὲ μετὰ τῶν ἱπέων τὰ μὲν ἄλλα πάντα δοῦναι τῷ παιδί ἀπενεγκεῖν οἴκαδε, ἀναβαλλόμενος δὲ θοιμάτιον ἐν τοῖς μύωψι κατὰ τὴν ἀγορὰν περιπατεῖν. [9] καὶ κυναρίου δὲ Μελιταίου τελευτήσαντος αὐτῷ, μνῆμα ποιῆσαι καὶ στηλίδιον, ποιήσας ἐπιγράψαι· Κλάδος Μελιταῖος. [10] καὶ ἀναθεὶς δακτυλίδιον χαλκοῦν ἐν τῷ Ἀσκληπιεῖ τοῦτο ἐκτρίβειν, στεφανοῦν, ἀλείφειν ὁσημέραι. [11] ἀμέλει δὲ καὶ διοικήσασθαι παρὰ τῶν συμπρυτάνεων, ὅπως ἀπαγγείλῃ τῷ δήμῳ τὰ ἱερά, καὶ παρσκευασμένος λαμπρὸν ἱμάτιον καὶ ἐστεφανωμένος παρελθὼν εἰπεῖν· Ὡ ἄνδρες Ἀθηναῖοι, ἐθύομεν οἱ πρυτάνεις τὰ ἱερά τῇ Μητρὶ τῶν θεῶν, τὰ γαλάξια, καὶ τὰ ἱερὰ καλά, καὶ ὑμεῖς δέχεσθε τὰ ἀγαθὰ. καὶ ταῦτα ἀπαγγείλας ἀπὼν διηγῆσασθαι οἴκαδε τῇ ἐαυτοῦ γυναικί, ὥς καθ' ὑπερβολὴν εὐημέρει.

ΑΝΕΛΕΥΘΕΡΙΑΣ ΚΒ΄

[1] Ἡ δὲ ἀνελευθερία ἐστὶν ἀπουσία τις φιλοτιμίας δαπάνην ἐχούσης, ὃ δὲ ἀνελεύθερος τοιοῦτός τις, [2] οἷος νικήσας τραγωδοῖς ταινίαν ἀναθεῖναι ξυλίνην τῷ Διονύσῳ ἐπιγράψας μόνον αὐτοῦ τὸ ὄνομα. [3] καὶ ἐπιδόσεων γινομένων ἐκ τοῦ δήμου, ἀναστὰς σιωπῇ ἐκ τοῦ μέσου ἀπελθεῖν. [4] καὶ ἐκδιδοὺς αὐτοῦ θυγατέρα τοῦ μὲν ἱερείου πλὴν τῶν ἱερέων τὰ κρέα ἀποδόσθαι, τοὺς δὲ διακονοῦντας ἐν τοῖς γάμοις οἰκοσίτους μισθώσασθαι. [5] καὶ τριηραρχῶν τὰ τοῦ κυβερνήτου στρώματα αὐτῷ ἐπὶ τοῦ καταστρώματος ὑποστορέννυσθαι, τὰ δὲ αὐτοῦ ἀποτιθέναι. [6] καὶ τὰ παιδιά δὲ δεινὸς μὴ πέμψαι εἰς διδασκάλου, ὅταν ἦ [τοῦ ἀποτιθέναι καὶ τὰ παιδιά] Μουσεῖα, ἀλλὰ φῆσαι κακῶς ἔχειν, ἵνα μὴ συμβάλωνται. [7] καὶ ἐξ ἀγορᾶς δὲ ὀψωνήσας τὰ κρέα αὐτὸς φέρειν καὶ τὰ λάχανα ἐν τῷ προκολπῷ. [8] καὶ ἔνδον μένειν, ὅταν ἐκδῷ θοιμάτιον ἐκπλῦναι. [9] καὶ φίλου ἔρανον συλλέγοντος καὶ διειλεγμένου αὐτῷ, προσιόντα προῖδόμενος ἀποκάμψας ἐκ τῆς ὁδοῦ τὴν κύκλῳ οἶκαδε πορευθῆναι. [10] καὶ τῇ γυναικὶ δὲ τῇ ἑαυτοῦ προῖκα «πολλήν» εἰσενεγκαμένη μὴ πρίασθαι θεράπαιναν, ἀλλὰ μισθοῦσθαι εἰς τὰς ἐξόδους ἐκ τῆς γυναικείας παιδίον τὸ συνακολουθησον. [11] καὶ τὰ ὑποδήματα παλιμπήξει κεκαττυμένα φορεῖν καὶ λέγειν, ὅτι Κέρατος οὐδὲν διαφέρει. [12] καὶ ἀναστὰς τὴν οἰκίαν καλλῦναι καὶ τὰς κλῖνας ἐκκορίσαι. [13] καὶ καθεζόμενος παραστρέψαι τὸν τρίβωνα, ὃν αὐτὸν φορεῖ.

ΑΛΑΖΟΝΕΙΑΣ ΚΓ΄

[1] Ἀμέλει δὲ ἡ ἀλαζονεία δόξει εἶναι προσποιήσις τις ἀγαθῶν οὐκ ὄντων, ὁ δὲ ἀλαζὼν τοιοῦτός τις, [2] οἷος ἐν τῷ διαζεύγματι ἐστηκῶς διηγεῖσθαι ξένοις, ὡς πολλὰ χρήματα αὐτῷ ἐστὶν ἐν τῇ θαλάττῃ· καὶ περὶ τῆς ἐργασίας τῆς δανειστικῆς διεξίεναι, ἡλική, καὶ αὐτὸς ὅσα εἴληφε καὶ ἀπολώλεκε· καὶ ἅμα ταῦτα πλεθρίζων πέμπειν τὸ παιδάριον εἰς τὴν τράπεζαν, δραχμῆς αὐτῷ κειμένης. [3] καὶ συνοδοιπόρου δὲ ἀπολαῦσαι ἐν τῇ ὁδῷ δεινὸς λέγων, ὡς μετ' Ἀλεξάνδρου ἐστρατεύσατο, καὶ ὡς αὐτῷ εἶχε, καὶ ὅσα λιθοκόλλητα ποτήρια ἐκόμισε· καὶ περὶ τῶν τεχνιτῶν τῶν ἐν τῇ Ἀσίᾳ, ὅτι βελτίους εἰσὶ τῶν ἐν τῇ Εὐρώπῃ, ἀμφισβητῆσαι· καὶ ταῦτα ψοφῆσαι, οὐδαμοῦ ἐκ τῆς πόλεως ἀποδεδημηκῶς. [4] καὶ γράμματα δὲ εἰπεῖν, ὡς ἄρεσσι παρ' Ἀντιπάτρου τριττὰ δὴ λέγοντα παραγενέσθαι αὐτὸν εἰς Μακεδονίαν· καὶ διδομένης αὐτῷ ἐξαγωγῆς ξύλων ἀτελοῦς ὅτι ἀπείρηται, ὅπως μὴδ' ὑφ' ἐνὸς συκοφαντηθῇ, Περαιτέρω φιλοσοφεῖν προσῆκε τοῖς Μακεδόσι. [5] καὶ ἐν τῇ σιτοδείᾳ δὲ ὡς πλείω ἢ πέντε τάλαντα αὐτῷ γένοιτο τὰ ἀναλώματα διδόντι τοῖς ἀπόροις τῶν πολιτῶν, ἀνανεῦειν γὰρ οὐ δύνασθαι. [6] καὶ ἀγνώτων δὲ παρακαθημένων κελεῦσαι θεῖναι τὰς ψήφους ἕνα αὐτῶν καὶ ποσῶν κατὰ χιλίας καὶ κατὰ μίαν καὶ προστιθεῖς πιθανὰ ἐκάστοις τούτων ὀνόματα ποιῆσαι καὶ δέκα τάλαντα· καὶ τοῦτο φῆσαι εἰσενηνοχέειν εἰς ἐράνους αὐτῶν· καὶ τὰς τριηραρχίας εἰπεῖν, ὅτι οὐ τίθῃσιν, οὐδὲ τὰς λειτουργίας, ὅσας λελειτούργηκε. [7] καὶ προσελθὼν δ' εἰς τοὺς ἵππους τοὺς ἀγαθοὺς τοῖς πωλοῦσι προσποιήσασθαι ὦνητιᾶν. [8] καὶ ἐπὶ τὰς κλίνας ἐλθὼν ἱματισμὸν ζητῆσαι εἰς δύο τάλαντα καὶ τῷ παιδί μάχεσθαι, ὅτι τὸ χρυσίον οὐκ ἔχων αὐτῷ ἀκολουθεῖ. [9] καὶ ἐν μισθῷ τὴν οἰκίαν οἰκῶν φῆσαι ταύτην εἶναι τὴν πατρῶαν πρὸς τὸν μὴ εἰδότα, καὶ διότι μέλλει πωλεῖν αὐτὴν διὰ τὸ ἐλάττω εἶναι αὐτῷ πρὸς τὰς ξενοδοχίας.

ΥΠΕΡΗΦΑΝΙΑΣ ΚΔ´

[1] Ὡςτις δὲ ἡ ὑπερηφανία καταφρόνησίς τις πλὴν αὐτοῦ τῶν ἄλλων, ὁ δὲ ὑπερήφανος τοιόσδε τις, [2] οἷος τῷ σπεύδοντι ἀπὸ δείπνου ἐντεύξεσθαι φάσκειν ἐν τῷ περιπατεῖν. [3] καὶ εὖ ποιήσας μεμνήσθαι φάσκειν. [4] καὶ βαδίζων [ἐν ταῖς ὁδοῖς] τὰς διαίτας κρίνειν [ἐν] τοῖς ἐπιτρέψασι. [5] καὶ χειροτονούμενος ἐξόμνυσθαι τὰς ἀρχάς, οὐ φάσκων σχολάζειν. [6] καὶ προσελθεῖν πρότερος οὐδενὶ θελήσει. [7] καὶ τοὺς πωλοῦντάς τι ἢ μεμισθωμένους δεινὸς κελεύσει ἥκειν πρὸς αὐτὸν ἅμ' ἡμέρα. [8] καὶ ἐν ταῖς ὁδοῖς πορευόμενος μὴ λαλεῖν τοῖς ἐντυγχάνουσι, κάτω κεκυφώς, ὅταν δὲ αὐτῷ δόξη, ἄνω πάλιν. [9] καὶ ἐστίων τοὺς φίλους αὐτὸς μὴ συνδειπνεῖν, ἀλλὰ τῶν ὑφ' αὐτόν τινι συντάξαι αὐτῶν ἐπιμελεῖσθαι. [10] καὶ προαποστέλλειν δὲ, ἐὰν πορεύηται, τὸν ἐροῦντα, ὅτι προσέρχεται. [11] καὶ οὔτε ἐπ' ἀλειφόμενον αὐτὸν οὔτε λουόμενον οὔτε ἐσθίοντα ἐᾶσαι ἂν εἰσελθεῖν. [12] ἀμέλει δὲ καὶ λογιζόμενος πρὸς τινα τῷ παιδὶ συντάξαι τὰς ψήφους διωθεῖν καὶ κεφάλαιον ποιήσαντι γράψαι αὐτῷ εἰς λόγον. [13] καὶ ἐπιστέλλων μὴ γράφειν, ὅτι Χαρίζοιο ἂν μοι, ἀλλ' ὅτι Βούλομαι γενέσθαι, καὶ Ἀπέσταλκα πρὸς σὲ ληψόμενος, καὶ Ὅπως ἄλλως μὴ ἔσται, καὶ Τὴν ταχίστην.

ΔΕΙΛΙΑΣ ΚΕ΄

[1] Ἀμέλει δὲ ἡ δειλία δόξειεν ἂν εἶναι ὑπειξίς τις ψυχῆς ἐκ φόβου, ὁ δὲ δειλὸς τοιοῦτός τις, [2] οἷος πλέων τὰς ἄκρας φάσκειν ἡμιολίας εἶναι· καὶ κλυδωνίου γενομένου ἐρωτᾶν, εἴ τις μὴ μεμύηται τῶν πλεόντων· καὶ τοῦ κυβερνήτου ἀνακύπτων μὲν πυνθάνεσθαι, εἰ μεσοπορεῖ καὶ τί αὐτῷ δοκεῖ τὰ τοῦ θεοῦ, καὶ πρὸς τὸν παρακαθήμενον λέγειν, ὅτι φοβεῖται ἀπὸ ἐνυπνίου τινός· καὶ ἐκδύς διδόναι τῷ παιδί τὸν χιτωνίσκον· καὶ δεῖσθαι πρὸς τὴν γῆν προσάγειν αὐτόν. [3] καὶ στρατευόμενος δὲ <τοῦ> πεζοῦ ἐκβοηθοῦντος <οἷός> τε προσκαλεῖν πάντας κελεύων πρὸς αὐτὸν καταστάντας πρῶτον περιδεῖν, καὶ λέγειν, ὡς ἔργον διαγινῶναί ἐστι, πότεροί εἰσιν οἱ πολέμιοι. [4] καὶ ἀκούων κραυγῆς καὶ ὀρῶν πίπτοντας εἰπεῖν πρὸς τοὺς παρεστηκότας, ὅτι τὴν σπάθην λαβεῖν ὑπὸ τῆς σπουδῆς ἐπελάθετο, τρέχειν ἐπὶ τὴν σκηνὴν, τὸν παῖδα ἐκπέμψας κελεύειν προσκοπεῖσθαι, ποῦ εἰσιν οἱ πολέμιοι, ἀποκρῦψαι αὐτὴν ὑπὸ τὸ προσκεφάλαιον, εἶτα διατρίβειν πολὺν χρόνον ὡς ζητῶν. [5] καὶ ἐν τῇ σκηνῇ ὀρῶν τραυματίαν τινὰ προσφερόμενον τῶν φίλων προσδραμὼν καὶ θαρρεῖν κελεύσας ὑπολαβὼν φέρειν. καὶ τοῦτον θεραπεύειν καὶ περισπογγίζειν καὶ παρακαθήμενος ἀπὸ τοῦ ἔλκουσ τὰς μυίας σοβεῖν καὶ πᾶν μᾶλλον ἢ μάχεσθαι τοῖς πολεμίοις. καὶ τοῦ σαλπιστοῦ δὲ τὸ πολεμικὸν σημήναντος καθήμενος ἐν τῇ σκηνῇ <εἰπεῖν>· Ἄπαγ' ἐς κόρακας· οὐκ ἔασει τὸν ἄνθρωπον ὕπνου λαβεῖν πυκνὰ σημαίνων. [6] καὶ αἵματος δὲ ἀνάπλεως ἀπὸ τοῦ ἄλλοτρίου τραύματος ἐντυγχάνειν τοῖς ἐκ τῆς μάχης ἐπανιοῦσι καὶ διηγεῖσθαι ὡς κινδυνεύσας· Ἐνα σέσωκα τῶν φίλων. καὶ εἰσάγειν πρὸς τὸν κατακεῖμενον σκεψομένουσ τοὺς δημότας, τοὺς φυλέτας καὶ τούτων ἅμ' ἐκάστῳ διηγεῖσθαι, ὡς αὐτὸς αὐτὸν ταῖς ἑαυτοῦ χερσὶν ἐπὶ σκηνὴν ἐκόμισεν.

ΟΛΙΓΑΡΧΙΑΣ ΚΣ΄

[1] Δόξειεν δ' ἂν εἶναι ἡ ὀλιγαρχία φιλαρχία τις ἰσχύος καὶ κέρδους γλιχομένη, ὁ δὲ ὀλιγαρχικὸς τοιοῦτος, [2] οἷος τοῦ δήμου βουλευομένου, τίνας τῷ ἄρχοντι προσαιρήσονται τῆς πομπῆς τοὺς συνεπιμελησομένους, παρελθὼν ἀποφήνασθαι, ὡς δεῖ αὐτοκράτορας τούτους εἶναι, κἂν ἄλλοι προβάλλωνται δέκα, λέγειν· Ἰκανὸς εἷς ἐστί, τοῦτον δὲ ὅτι δεῖ ἄνδρα εἶναι· καὶ τῶν Ὀμήρου ἐπῶν τοῦτο ἐν μόνον κατέχειν, ὅτι

Οὐκ ἀγαθὸν πολυκοιρανίη, εἷς κοίρανος ἔστω,

τῶν δὲ ἄλλων μηδὲν ἐπίστασθαι· [3] ἀμέλει δὲ δεινὸς τοῖς τοιούτοις τῶν ὀλίγων <λόγοις> χρήσασθαι, ὅτι Δεῖ αὐτοὺς ἡμᾶς συνελθόντας περὶ τούτων βουλευσάσθαι καὶ ἐκ τοῦ ὄχλου καὶ τῆς ἀγορᾶς ἀπαλλαγῆναι καὶ παύσασθαι ἀρχαῖς πλησιάζοντας καὶ ὑπὸ τούτων οὕτως ὑβριζομένους ἢ τιμωμένους, <καὶ> ὅτι Ἡ τούτους δεῖ ἢ ἡμᾶς οἰκεῖν τὴν πόλιν. [4] καὶ τὸ μέσον δὲ τῆς ἡμέρας ἐξίων καὶ τὸ ἱμάτιον ἀναβεβλημένος καὶ μέσῃν κουρὰν κεκαρμένος καὶ ἀκριβῶς ἀπωνυχισμένος σοβεῖν τοὺς τοιούτους λόγους <λέγων> τὴν τοῦ Ὠιδείου· [5] Διὰ τοὺς συκοφάντας οὐκ οἰκητόν ἐστιν ἐν τῇ πόλει, καὶ ὡς Ἐν τοῖς δικαστηρίοις δεινὰ πάσχομεν ὑπὸ τῶν δεκαζομένων, καὶ ὡς Θαυμάζω τῶν πρὸς τὰ κοινὰ προσιόντων, τί βούλονται, καὶ ὡς Ἀχάριστόν ἐστι <τὸ> τοῦ νέμοντος καὶ διδόντος, καὶ ὡς αἰσχύνεται ἐν τῇ ἐκκλησίᾳ, ὅταν παρακάθηται τις αὐτῷ λεπτὸς καὶ αὐχμῶν· [6] καὶ εἰπεῖν· Πότε παυσόμεθα ὑπὸ τῶν λειτουργιῶν καὶ τῶν τριηραρχιῶν ἀπολλύμενοι; καὶ ὡς μισητόν τὸ τῶν δημαγωγῶν γένος, τὸν Θησέα πρῶτον φήσας τῶν κακῶν τῇ πόλει γεγενέαι αἴτιον· τοῦτον γὰρ ἐκ δώδεκα πόλεων εἰς μίαν καταγαγεῖν τὰ <πλήθη> λυθείσης βασιλείας· καὶ δίκαια αὐτὸν παθεῖν· πρῶτον γὰρ αὐτὸν ἀπολέσθαι ὑπ' αὐτῶν· καὶ τοιαῦτα ἕτερα πρὸς τοὺς ξένους καὶ τῶν πολιτῶν τοὺς ὁμοτρόπους καὶ ταῦτα προαιρουμένους.

ΟΨΙΜΑΘΙΑΣ ΚΖ΄

[1] Ἡ δὲ ὀψιμαθία φιλοπονία δόξειεν ἂν εἶναι ὑπὲρ τὴν ἡλικίαν, ὁ δὲ ὀψιμαθὴς τοιοῦτός τις, [2] οἷος ῥήσεις μανθάνειν ἐξήκοντα ἔτη γεγονώς καὶ ταύτας λέγων παρὰ πότον ἐπιλανθάνεσθαι. [3] καὶ παρὰ τοῦ υἱοῦ μανθάνειν τὸ ἐπὶ δόρυ καὶ ἐπὶ ἀσπίδα καὶ ἐπ' οὐράν. [4] καὶ εἰς ἡρῶα συμβάλλεσθαι τοῖς μεираκίοις λαμπάδα τρέχειν. [5] ἀμέλει δὲ κἂν που κληθῇ εἰς Ἡράκλειον, ῥίψας τὸ ἱμάτιον τὸν βοῦν αἵρεσθαι, ἵνα τραχηλίσῃ. [6] καὶ προσανατρίβεσθαι εἰσιὼν εἰς τὰς παλαιίστρας. [7] καὶ ἐν τοῖς θαύμασι τρία ἢ τέτταρα πληρώματα ὑπομένειν τὰ ἄσματα ἐκμανθάνων. [8] καὶ τελούμενος τῷ Σαβαζίῳ σπεῦσαι, ὅπως καλλιστεύσῃ παρὰ τῷ ἱερεῖ. [9] καὶ ἐρῶν ἐταίρας καὶ κριοὺς προσβάλλων ταῖς θύκραις πληγὰς εἰληφώς ὑπ' ἀντεραστοῦ δικάζεσθαι. [10] καὶ εἰς ἀγρὸν ἐφ' ἵππου ἀλλοτρίου κατοχούμενος ἅμα μελετᾶν ἱππάζεσθαι καὶ πεσὼν τὴν κεφαλὴν κατεαγένοι. [11] καὶ ἐν δεκαδισταῖς συνάγειν τοὺς μετ' αὐτοῦ συναύζοντας. [12] καὶ μακρὸν ἀνδριάντα παίζειν πρὸς τὸν ἑαυτοῦ ἀκόλουθον. [13] καὶ διατοξεύεσθαι καὶ διακοντίζεσθαι τῷ τῶν παιδίων παιδαγωγῷ καὶ ἅμα μανθάνειν παρ' αὐτοῦ <παραινεῖν>, ὡς ἂν καὶ ἐκείνου μὴ ἐπισταμένου. [14] καὶ παλαίων δ' ἐν τῷ βαλανείῳ πυκνὰ τὴν ἔδραν στρέφειν, ὅπως πεπαιδεῦσθαι δοκῇ. [15] καὶ ὅταν ὦσιν ἐγγὺς γυναῖκες, μελετᾶν ὀρχεῖσθαι αὐτὸς αὐτῷ τερετίζων.

ΚΑΚΟΛΟΓΙΑΣ ΚΗ΄

[1] Ἦστί δὲ ἡ κακολογία ἀγωγή ψυχῆς εἰς τὸ χειρόν ἐν λόγοις, ὁ δὲ κακολόγος τοιόσδε τις, [2] οἷος ἐρωτηθεὶς· Ὁ δεῖνα τίς ἐστιν; «εἰπεῖν» οἰκονομῶν καθάπερ οἱ γενεαλογοῦντες· Πρῶτον ἀπὸ τοῦ γένους αὐτοῦ ἄρξομαι. Τούτου ὁ μὲν πατήρ ἐξ ἀρχῆς Σωσίας ἐκαλεῖτο, ἐγένετο δὲ ἐν τοῖς στρατιώταις Σωσίστρατος, ἐπειδὴ δὲ εἰς τοὺς δημότας ἐνεγράφη, «Σωσίδημος». Ἡ μέντοι μήτηρ εὐγενῆς Θραττά ἐστι· καλεῖται γοῦν ἡ ψυχὴ Κρινοκόρακα· τὰς δὲ τοιαύτας φασὶν ἐν τῇ πατρίδι εὐγενεῖς εἶναι. Αὐτὸς δὲ οὗτος ὥς ἐκ τοιούτων γεγρονῶς κακὸς καὶ μαστιγίας. [3] καὶ κακονοῶν δὲ πρὸς τινὰ εἰπεῖν· Ἐγὼ δὴπου τὰ τοιαῦτα οἶδα, ὑπὲρ ὧν σὺ ἔπλασας πρὸς ἐμέ· καπὶ τούτοις διεξιὼν· Αὗται αἱ γυναῖκες ἐκ τῆς ὁδοῦ τοὺς παριόντας συναρπάζουσι, καὶ Οἰκία τις αὕτη τὰ σκέλη ἡρκυῖα· οὐ γὰρ οἶον λῆρὸς ἐστὶ, τὸ λεγόμενον, ἀλλ' ὥσπερ αἱ κύνες ἐν ταῖς ὁδοῖς συνέχονται, καὶ Τὸ ὅλον ἀνδρολάβοι τινές, καὶ Αὗται τὴν θύραν τὴν αὐλείον ὑπακούουσι. [4] «ἀμέλει δὲ καὶ κακῶς λεγόντων ἐτέρων συνεπιλαμβάνεσθαι καὶ αὐτὸς εἶπας· Ἐγὼ δὲ τοῦτον τὸν ἄνθρωπον πλεον πάντων μεμίσηκα· καὶ γὰρ εἰδεχθῆς τις ἀπὸ τοῦ προσώπου ἐστίν· ἡ δὲ πονηρία, οὐδὲν ὅμοιον· σημεῖον δέ· τῇ γὰρ ἑαυτοῦ γυναικὶ τάλαντα εἰσενεγκαμένη προῖκα, ἐξ οὗ παιδίον αὐτῷ γεννᾷ, τρεῖς χαλκοὺς εἰς ὄψον δίδωσι καὶ τῷ ψυχρῷ λούεσθαι ἀναγκάζει τῇ τοῦ Ποσειδῶνος ἡμέρᾳ. [5] καὶ συγκαθήμενος δεινὸς περὶ τοῦ ἀναστάντος εἰπεῖν καὶ ἀρχὴν γε εἰληφὼς μὴ ἀποσχέσθαι μηδὲ τοὺς οἰκείους αὐτοῦ λοιδορῆσαι. [6] καὶ πλεῖστα περὶ τῶν «αὐτοῦ» φίλων καὶ οἰκείων κακὰ εἰπεῖν, καὶ περὶ τῶν τετελευτηκότων, κακῶς λέγειν ἀποκαλῶν παρρησίαν καὶ δημοκρατίαν καὶ ἐλευθερίαν καὶ τῶν ἐν τῷ βίῳ ἥδιστα τοῦτο ποιῶν. [7] [Οὕτως ὁ τῆς βασκανίας ἐρεθισμὸς μανικοὺς καὶ ἐξεστηκότας ἀνθρώπους τοῖς ἥθεσι ποιεῖ.]

ΦΙΛΟΠΟΝΗΡΙΑΣ ΚΘ΄

[1] Ὡςτι δὲ ἡ φιλοπονηρία ἐπιθυμία κακίας, ὁ δὲ φιλοπόννηρός ἐστι τοιόσδε τις, [2] οἷος ἐντυγχάνειν τοῖς ἡττημένοις καὶ δημοσίους ἀγῶνας ὠφληκόσι καὶ ὑπολαμβάνειν, ἐὰν τούτοις χρῆται, ἐμπειρότερος γενήσεσθαι καὶ φοβερώτερος. [3] καὶ ἐπὶ τοῖς χρηστοῖς εἰπεῖν, ὡς γίνεται κατὰ φύσιν [ὡς] οὐδείς [ἐστι] χρηστός, καὶ ὁμοίους πάντας εἶναι, καὶ ἐπισκῆψαι δέ, ὡς χρηστός ἐστι. [4] καὶ τὸν πονηρὸν δὲ εἰπεῖν ἐλεύθερον, ἐὰν βούληται τις εἰς πείραν ἔλθειν, καὶ τὰ μὲν ἄλλα ὁμολογεῖν ἀληθῆ ὑπὲρ αὐτοῦ λέγεσθαι ὑπὸ τῶν ἀνθρώπων, ἕνια δὲ ἀνανεύειν· φῆσαι γὰρ αὐτὸν εὐφυῆ καὶ φιλέταιρον καὶ ἐπιδέξιον· καὶ διατείνεσθαι δὲ ὑπὲρ αὐτοῦ, ὡς οὐκ ἐντετύχηκεν ἀνθρώπῳ ἱκανωτέρῳ. [4a] καὶ εὖνους δὲ εἶναι αἰτίῳ ἐν ἐκκλησίᾳ λέγοντι ἢ ἐπὶ δικαστηρίῳ κρινομένῳ· καὶ πρὸς τοὺς καθημένους δὲ εἰπεῖν δεινός, ὡς οὐ δεῖ τὸν ἄνδρα, ἀλλὰ τὸ πρᾶγμα κρίνεσθαι· καὶ φῆσαι αὐτὸν κύνα εἶναι τοῦ δήμου, φυλάττειν γὰρ αὐτὸν τοὺς ἀδικοῦντας· καὶ εἰπεῖν, ὡς Οὐχ ἔξομεν τοὺς ὑπὲρ τῶν κοινῶν συναχθεσθισομένους, ἂν τοὺς τοιούτους προώμεθα. [5] δεινός δὲ καὶ προστατῆσαι φαύλων καὶ συνηγορῆσαι ἐν δικαστηρίοις ἐπὶ πονηροῖς πράγμασιν καὶ κρίσιν κρίνων ἐκδέχεσθαι τὰ ὑπὸ τῶν ἀντιδίκων λεγόμενα ἐπὶ τὸ χεῖρον. [6] [καὶ τὸ ὅλον ἡ] φιλοπονηρία ἀδελφή ἐστι τῆς πονηρίας. καὶ ἀληθές ἐστι τὸ τῆς παροιμίας, τὸ ὅμοιον πρὸς τὸ ὅμοιον πορεύεσθαι.]

ΑΙΣΧΡΟΚΕΡΔΕΙΑΣ Λ'

[1] Ἡ δὲ αἰσχροκέρδειά ἐστιν ἐπιθυμία κέρδους αἰσχροῦ, ἔστι δὲ τοιοῦτος ὁ αἰσχροκερδής, [2] οἷος ἐστιῶν ἄρτους ἱκανοὺς μὴ παραθεῖναι [3] καὶ δανείσασθαι παρὰ ξένου παρ' αὐτῷ καταλύοντος. [4] καὶ διανέμων μερίδας φῆσαι δίκαιον εἶναι διμοίρῳ τῷ διανέμοντι δίδοσθαι καὶ εὐθὺς αὐτῷ νεῖμαι. [5] καὶ οἶνοπωλῶν κεκραμένον τὸν οἶνον τῷ φίλῳ ἀποδόσθαι. [6] καὶ ἐπὶ θέαν τηνικαῦτα πορεύεσθαι ἄγων τοὺς υἱεῖς, ἥνικα προῖκα ἀφιᾶσιν οἱ θεατρῶναι. [7] καὶ ἀποδημῶν δημοσίᾳ τὸ μὲν ἐκ τῆς πόλεως ἐφόδιον οἴκοι καταλιπεῖν, παρὰ δὲ τῶν συμπρεσβευτῶν δανείζεσθαι· καὶ τῷ ἀκολουθῶ μεῖζον φορτίον ἐπιθεῖναι ἢ δύναται φέρειν καὶ ἐλάχιστα ἐπιτήδεια τῶν ἄλλων παρέχειν· καὶ ξενίων τὸ μέρος τὸ αὐτοῦ ἀπαιτήσας ἀποδόσθαι. [8] καὶ ἀλειφόμενος ἐν τῷ βαλανείῳ [καὶ] εἰπών· Σαπρόν γε τὸ ἔλαιον ἐπρίω, ὃ παιδάριον· τῷ ἄλλοτρίῳ ἀλείφεσθαι. [9] καὶ τῶν εὕρισκομένων χαλκῶν ἐν ταῖς ὁδοῖς ὑπὸ τῶν οἰκετῶν δεινὸς ἀπαιτησά τὸ μέρος, κοινὸν εἶναι φήσας τὸν Ἑρμῆν. [10] καὶ θοιμάτιον ἐκδοῦναι πλῦναι καὶ χρησάμενος παρὰ γνωρίμου ἐφελκύσαι πλείους ἡμέρας, ἕως ἂν ἀπαιτηθῇ. [11] καὶ τὰ τοιαῦτα· Φειδωνεῖῳ μέτρῳ τὸν πύνδακα εἰσκεκρουμένῳ μετρεῖν αὐτὸς τοῖς ἔνδον τὰ ἐπιτήδεια σφόδρα ἀποψῶν. [12] ὑποπρίασθαι φίλου δοκοῦντος πρὸς τρόπου πωλεῖν. [13] καὶ χρέος δὲ ἀποδιδόντες τριάκοντα μνῶν ἔλαττον τέτταρσι δραχμαῖς ἀποδοῦναι. [14] καὶ τῶν υἱῶν δὲ μὴ πορευομένων εἰς τὸ διδασκαλεῖον τὸν μῆνα ὅλον διὰ τιν' ἄρρωστίαν ἀφαιρεῖν τοῦ μισθοῦ κατὰ λόγον· καὶ τὸν Ἀνθεστηριῶνα μῆνα μὴ πέμπειν αὐτοὺς εἰς τὰ μαθήματα διὰ τὸ θέας εἶναι πολλάς, ἵνα μὴ τὸν μισθὸν ἐκτίνῃ. [15] καὶ παρὰ παιδὸς κομιζόμενος ἀποφορὰν τοῦ χαλκοῦ τὴν ἐπικαταλλαγὴν προσαπαιτεῖν, [καὶ] λογισμὸν δὲ λαμβάνων παρὰ τοῦ χειρίζοντος. [16] καὶ φράτορας ἐστιῶν αἰτεῖν τοῖς ἑαυτοῦ παισὶν ἐκ τοῦ κοινοῦ ὄψον, τὰ δὲ καταλειπόμενα ἀπὸ τῆς τραπέζης ἡμίση τῶν ῥαφανίδων ἀπογράφεσθαι, ἵνα οἱ διακονοῦντες παῖδες μὴ λάβωσι. [17] συναποδημῶν δὲ μετὰ γνωρίμων χρήσασθαι τοῖς ἐκείνων παισὶ, τὸν δὲ ἑαυτοῦ ἔξω μισθῶσαι καὶ μὴ ἀναφέρειν εἰς τὸ κοινὸν τὸν μισθόν. [18] ἀμέλει δὲ καὶ συναγόντων παρ' αὐτῷ ὑποθεῖναι τῶν παρ' ἑαυτοῦ διδομένων ξύλων καὶ φακῶν καὶ ὄξους καὶ ἄλῶν καὶ ἐλαίου τοῦ εἰς τὸν λύχνον. [19] καὶ γαμοῦντός τινος τῶν φίλων καὶ ἐκδιδομένου θυγατέρα πρὸ χρόνου τινὸς ἀποδημῆσαι, ἵνα «μὴ» προπέμψῃ προσφορὰν. [20] καὶ παρὰ τῶν γνωρίμων τοιαῦτα κίχρασθαι, ἃ μὴτ' ἂν ἀπαιτῆσαι μὴτ' ἀπ' ἀποδιδόντων ταχέως ἂν τις κομίσαιτο.

The Biographies



The remains of the Lyceum, a gymnasium and public meeting place in Athens, named after the god of the grove that housed the Lyceum, Apollo. Though best known for its connection with Aristotle and the Peripatetic school, the Lyceum was in existence long before Aristotle's formal founding in 334 or 335 BC and continued under several heads until the Roman general Sulla sacked Athens in 86 BC. When, after the death of Alexander, anti-Macedonian feeling forced Aristotle to leave Athens, Theophrastus remained behind as head of the school, a position he continued to hold after Aristotle's death in c. 322. The remains of the Lyceum were discovered in Athens in 1996.

Theophrastus by Diogenes Laërtius



Translated by Robert Drew Hicks

From 'Lives of the Eminent Philosophers', Book V

36. Theophrastus was a native of Eresus, the son of Melantes, a fuller, as stated by Athenodorus in the eighth book of his *Walks*. He first heard his countryman Alcippus lecture in his native town and afterwards he heard Plato, whom he left for Aristotle. And when the latter withdrew to Chalcis he took over the school himself in the 114th Olympiad. A slave of his named Pompylus is also said to have been a philosopher, according to Myronianus of Amastris in the first book of his *Historical Parallels*. Theophrastus was a man of remarkable intelligence and industry and, as Pamphila says in the thirtysecond book of her *Memorabilia*, he taught Menander the comic poet.

37. Furthermore, he was ever ready to do a kindness and fond of discussion. Casander certainly granted him audience and Ptolemy made overtures to him. And so highly was he valued at Athens that, when Agnonides ventured to prosecute him for impiety, the prosecutor himself narrowly escaped punishment. About 2000 pupils used to attend his lectures. In a letter to Phanias the Peripatetic, among other topics, he speaks of a tribunal as follows: "To get a public or even a select circle such as one desires is not easy. If an author reads his work, he must re-write it. Always to shirk revision and ignore criticism is a course which the present generation of pupils will no longer tolerate." And in this letter he has called some one "pedant."

38. Although his reputation stood so high, nevertheless for a short time he had to leave the country with all the other philosophers, when Sophocles the son of Amphiclides proposed a law that no philosopher should preside over a school except by permission of the Senate and the people, under penalty of death. The next year, however, the philosophers returned, as Philo had prosecuted Sophocles for making an illegal proposal. Whereupon the Athenians repealed the law, fined Sophocles five talents, and voted the recall of the philosophers, in order that Theophrastus also might return and live

there as before. He bore the name of Tyrtaeus, and it was Aristotle who re-named him Theophrastus on account of his graceful style. 39. And Aristippus, in his fourth book *On the Luxury of the Ancients*, asserts that he was enamoured of Aristotle's son Nicomachus, although he was his teacher. It is said that Aristotle applied to him and Callisthenes what Plato had said of Xenocrates and himself (as already related), namely, that the one needed a bridle and the other a goad; for Theophrastus interpreted all his meaning with an excess of cleverness, whereas the other was naturally backward. He is said to have become the owner of a garden of his own after Aristotle's death, through the intervention of his friend Demetrius of Phalerum. There are pithy sayings of his in circulation as follows: "An unbridled horse," he said, "ought to be trusted sooner than a badly-arranged discourse." 40. To some one who never opened his lips at a banquet he remarked: "Yours is a wise course for an ignoramus, but in an educated man it is sheer folly." He used constantly to say that in our expenditure the item that costs most is time.

He died at the age of eighty-five, not long after he had relinquished his labours. My verses upon him are these:

Not in vain was the word spoken to one of human kind, "Slacken the bow of wisdom and it breaks." Of a truth, so long as Theophrastus laboured he was sound of limb, but when released from toil his limbs failed him and he died.

It is said that his disciples asked him if he had any last message for them, to which he replied: "Nothing else but this, that many of the pleasures which life boasts are but in the seeming. 41. For when we are just beginning to live, lo! we die. Nothing then is so unprofitable as the love of glory. Farewell, and may you be happy. Either drop my doctrine, which involves a world of labour, or stand forth its worthy champions, for you will win great glory. Life holds more disappointment than advantage. But, as I can no longer discuss what we ought to do, do you go on with the inquiry into right conduct."

With these words, they say, he breathed his last. And according to the story all the Athenians, out of respect for the man, escorted his bier on foot. And Favorinus tells that he had in his old age to be carried about in a litter; and this he says on the authority of Hermippus, whose account is taken from a remark of Arcesilaus of Pitane to Lacydes of Cyrene.

42. He too has left a very large number of writings. I think it right to catalogue them also because they abound in excellence of every kind. They

are as follows:

- Three books of Prior Analytics.
- Seven books of Posterior Analytics.
- On the Analysis of Syllogisms, one book.
- Epitome of Analytics, one book.
- Two books of Classified Topics.
- Polemical discussion on the Theory of Eristic Argument.
- Of the Senses, one book.
- A Reply to Anaxagoras, one book.
- On the Writings of Anaxagoras, one book.
- On the Writings of Anaximenes, one book.
- On the Writings of Archelaus, one book.
- Of Salt, Nitre and Alum, one book.
- Of Petrifications, two books.
- On Indivisible Lines, one book.
- Two books of Lectures.
- Of the Winds, one book.
- Characteristics of Virtues, one book.
- Of Kingship, one book.
- Of the Education of Kings, one book.
- Of Various Schemes of Life, three books.
- 43. Of Old Age, one book.
- On the Astronomy of Democritus, one book.
- On Meteorology, one book.
- On Visual Images or Emanations, one book.
- On Flavours, Colours and Flesh, one book.
- Of the Order of the World, one book.
- Of Mankind, one book.
- Compendium of the Writings of Diogenes, one book.
- Three books of Definitions.
- Concerning Love, one book.
- Another Treatise on Love, one book.
- Of Happiness, one book.
- On Species or Forms, two books.
- On Epilepsy, one book.
- On Frenzy, one book.
- Concerning Empedocles, one book.
- Eighteen books of Refutative Arguments.
- Three books of Polemical Objections.
- Of the Voluntary, one book.
- Epitome of Plato's Republic, two books.
- On the Diversity of Sounds uttered by Animals of the same Species, one book.
- Of Sudden Appearances, one book.
- Of Animals which bite or gore, one book.
- Of Animals reputed to be spiteful, one book.
- Of the Animals which are confined to Dry Land, one book.

- 44. Of those which change their Colours, one book.
- Of Animals that burrow, one book.
- Of Animals, seven books.
- Of Pleasure according to Aristotle, one book.
- Another treatise on Pleasure, one book.
- Theses, twenty-four books.
- On Hot and Cold, one book.
- On Vertigo and Dizziness, one book.
- On Sweating Sickness, one book.
- On Affirmation and Negation, one book.
- Callisthenes, or On Bereavement, one book.
- On Fatigues, one book.
- On Motion, three books.
- On Precious Stones, one book.
- On Pestilences, one book.
- On Fainting, one book.
- Megarian Treatise, one book.
- Of Melancholy, one book.
- On Mines, two books.
- On Honey, one book.
- Compendium on the Doctrines of Metrodorus, one book.
- Two books of Meteorology.
- On Intoxication, one book.
- Twenty-four books of Laws distinguished by the letters of the alphabet.
- Ten books of an Epitome of Laws.
- 45. Remarks upon Definitions, one book.
- On Smells, one book.
- On Wine and Oil.
- Introduction to Propositions, eighteen books.
- Of Legislators, three books.
- Of Politics, six books.
- A Political Treatise dealing with important Crises, four books.
- Of Social Customs, four books.
- Of the Best Constitution, one book.
- A Collection of Problems, five books.
- On Proverbs, one book.
- On Coagulation and Liquefaction, one book.
- On Fire, two books.
- On Winds, one book.
- Of Paralysis, one book.
- Of Suffocation, one book.
- Of Mental Derangement, one book.
- On the Passions, one book.
- On Symptoms, one book.
- Two books of Sophisms.
- On the solution of Syllogisms, one book.
- Two books of Topics.

- Of Punishment, two books.
- On Hair, one book.
- Of Tyranny, one book.
- On Water, three books.
- On Sleep and Dreams, one book.
- Of Friendship, three books.
- Of Ambition, two books.
- 46. On Nature, three books.
- On Physics, eighteen books.
- An Epitome of Physics, two books.
- Eight books of Physics.
- A Reply to the Physical Philosophers, one book
- Of Botanical Researches, ten books.
- Of Botanical Causes, eight books.
- On Juices, five books.
- Of False Pleasure, one book.
- One Dissertation on the Soul.
- On Unscientific Proofs, one book.
- On Simple Problems, one book.
- Harmonics, one book.
- Of Virtue, one book.
- Materials for Argument, or Contrarities, one book.
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- Lectures on Ethics, one book.
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- On Research, one book.
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- [Character Sketches, one book.]
- On Truth and Falsehood, one book.
- The History of Theological Inquiry, six books.
- Of the Gods, three books.
- Geometrical Researches, four books.
- 49. Epitomes of Aristotle's work on Animals, six books.
- Two books of Refutative Arguments.
- Theses, three books.
- Of Kingship, two books.
- Of Causes, one book.
- On Democritus, one book.
- [Of Calumny, one book.]
- Of Becoming, one book.

- Of the Intelligence and Character of Animals, one book.
- On Motion, two books.
- On Vision, four books.
- Relating to Definitions, two books.
- On Data, one book.
- On Greater and Less, one book.
- On the Musicians, one book.
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- Lecture-Notes, one book.
- On the Eruption in Sicily, one book.
- On Things generally admitted, one book.
- [On Problems in Physics, one book.]
- What are the methods of attaining Knowledge, one book.
- On the Fallacy known as the Liar, three books.
- 50. Prolegomena to Topics, one book.
- Relating to Aeschylus, one book.
- Astronomical Research, six books.
- Arithmetical Researches on Growth, one book.
- Acicharus, one book.
- On Forensic Speeches, one book.
- [Of Calumny, one book.]
- Correspondence with Astycreon, Phanias and Nicanor.
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- Evias, one book.
- On Times of Crisis, two books.
- On Relevant Arguments, one book.
- On the Education of Children, one book.
- Another treatise with the same title, one book.
- Of Education or of the Virtues or of Temperance, one book.
- [An Exhortation to Philosophy, one book.]
- On Numbers, one book.
- Definitions concerning the Diction of Syllogisms, one book.
- Of the Heavens, one book.
- Concerning Politics, two books.
- On Nature.
- On Fruits.
- On Animals.

In all 232,808 lines. So much for his writings.

51. I have also come across his will, couched in the following terms:

“All will be well; but in case anything should happen, I make these dispositions. I give and bequeath all my property at home to Melantes and Pancreon, the sons of Leon. It is my wish that out of the trust funds at the

disposal of Hipparchus the following appropriations should be made. First, they should be applied to finish the rebuilding of the Museum with the statues of the goddesses, and to add any improvements which seem practicable to beautify them. Secondly, to replace in the temple the bust of Aristotle with the rest of the dedicated offerings which formerly were in the temple. Next, to rebuild the small cloister adjoining the Museum at least as handsomely as before, and to replace in the lower cloister the tablets containing maps of the countries traversed by explorers. 52. Further, to repair the altar so that it may be perfect and elegant. It is also my wish that the statue of Nicomachus should be completed of life size. The price agreed upon for the making of the statue itself has been paid to Praxiteles, but the rest of the cost should be defrayed from the source above mentioned. The statue should be set up in whatever place seems desirable to the executors entrusted with carrying out my other testamentary dispositions. Let all that concerns the temple and the offerings set up be arranged in this manner. The estate at Stagira belonging to me I give and bequeath to Callinus. The whole of my library I give to Neleus. The garden and the walk and the houses adjoining the garden, all and sundry, I give and bequeath to such of my friends hereinafter named as may wish to study literature and philosophy there in common, 53. since it is not possible for all men to be always in residence, on condition that no one alienates the property or devotes it to his private use, but so that they hold it like a temple in joint possession and live, as is right and proper, on terms of familiarity and friendship. Let the community consist of Hipparchus, Neleus, Strato, Callinus, Demotimus, Demaratus, Callisthenes, Melantes, Pancreon, Nicippus. Aristotle, the son of Metrodorus and Pythias, shall also have the right to study and associate with them if he so desire. And the oldest of them shall pay every attention to him, in order to ensure for him the utmost proficiency in philosophy. Let me be buried in any spot in the garden which seems most suitable, without unnecessary outlay upon my funeral or upon my monument. 54. And according to previous agreement let the charge of attending, after my decease, to the temple and the monument and the garden and the walk be shared by Pompylus in person, living close by as he does, and exercising the same supervision over all other matters as before; and those who hold the property shall watch over his interests. Pompylus and Threpta have long been emancipated and have done me much service; and I think that 2000 drachmas

certainly ought to belong to them from previous payments made to them by me, from their own earnings, and my present bequest to them to be paid by Hipparchus, as I stated many times in conversation with Melantes and Pancreon themselves, who agreed with me. I give and bequeath to them the maidservant Somatale. 55. And of my slaves I at once emancipate Molon and Timon and Parmeno; to Manes and Callias I give their freedom on condition that they stay four years in the garden and work there together and that their conduct is free from blame. Of my household furniture let so much as the executors think right be given to Pompylus and let the rest be sold. I also devise Carion to Demotimus, and Donax to Neleus. But Euboeus must be sold. Let Hipparchus pay to Callinus 3000 drachmas. And if I had not seen that Hipparchus had done great service to Melantes and Pancreon and formerly to me, and that now in his private affairs he has made shipwreck, I would have appointed him jointly with Melantes and Pancreon to carry out my wishes. 56. But, since I saw that it was not easy for them to share the management with him, and I thought it more advantageous for them to receive a fixed sum from Hipparchus, let Hipparchus pay Melantes and Pancreon one talent each and let Hipparchus provide funds for the executors to defray the expenses set down in the will, as each disbursement falls due. And when Hipparchus shall have carried out all these injunctions, he shall be released in full from his liabilities to me. And any advance that he has made in Chalcis in my name belongs to him alone. Let Hipparchus, Neleus, Strato, Callinus, Demotimus, Callisthenes and Ctesarchus be executors to carry out the terms of the will. 57. One copy of the will, sealed with the signet-ring of Theophrastus, is deposited with Hegesias, the son of Hipparchus, the witnesses being Callippus of Pallene, Philomelus of Euonymaea, Lysander of Hyba, and Philo of Alopece. Olympiodorus has another copy, the witnesses being the same. The third copy was received by Adeimantus, the bearer being Androstenes junior; and the witnesses are Arimnestus the son of Cleobulus, Lysistratus the son of Pheidon of Thasos, Strato the son of Arcesilaus of Lampsacus, Thesippus the son of Thesippus of Cerameis, and Dioscurides the son of Dionysius of Epicephisia.”

Such is the tenor of his will.

There are some who say that Erasistratus the physician was also a pupil of his, and it is not improbable.

Theophrastus' Life and Works by Arthur F. Hort



Originally published in the Loeb Classical Library edition of 'Enquiry into Plants', 1916

Such information as we possess concerning the life of Theophrastus comes mainly from Diogenes Laertius' *Lives of the Philosophers*, compiled at least four hundred years after Theophrastus' death; it is given therefore here for what it may be worth; there is no intrinsic improbability in most of what Diogenes records.

He was born in 370 b.c. at Eresos in Lesbos; at an early age he went to Athens and there became a pupil of Plato. It may be surmised that it was from him that he first learnt the importance of that principle of classification which runs through all his extant works, including even the brochure known as the 'Characters' (if it is rightly ascribed to him), and which is ordinarily considered as characteristic of the teaching of his second master Aristotle. But in Plato's own later speculations classification had a very important place, since it was by grouping things in their 'natural kinds' that, according to his later metaphysic, men were to arrive at an adumbration of the 'ideal forms' of which these kinds are the phenomenal counterpart, and which constitute the world of reality. Whether Theophrastus gathered the principle of classification from Plato or from his fellow-pupil Aristotle, it appears in his hands to have been for the first time systematically applied to the vegetable world. Throughout his botanical works the constant implied question is 'What is its difference?', 'What is its essential nature?', viz. 'What are the characteristic features in virtue of which a plant may be distinguished from other plants, and which make up its own 'nature' or essential character?'

Theophrastus appears to have been only Aristotle's junior by fifteen years. On Plato's death he became Aristotle's pupil, but, the difference in age not being very great, he and his second master appear to have been on practically equal terms. We are assured that Aristotle was deeply attached to his friend; while as earnest of an equally deep attachment on the other side Theophrastus took Aristotle's son under his particular care after his father's death. Aristotle

died at the age of sixty-three, leaving to his favourite pupil his books, including the autographs of his own works, and his garden in the grounds of the Lyceum. The first of these bequests, if the information is correct, is of great historical importance; it may well be that we owe to Theophrastus the publication of some at least of his master's voluminous works. And as to the garden it is evident that it was here that the first systematic botanist made many of the observations which are recorded in his botanical works. Diogenes has preserved his will, and there is nothing in the terms of this interesting document to suggest that it is not authentic. Of special interest is the provision made for the maintenance of the garden; it is bequeathed to certain specified friends and to those who will spend their time with them in learning and philosophy; the testator is to be buried in it without extravagant expense, a custodian is appointed, and provision is made for the emancipation of various gardeners, so soon as they have earned their freedom by long enough service.

According to Diogenes Theophrastus died at the age of eighty-five. He is made indeed to say in the probably spurious Preface to the 'Characters' that he is writing in his ninety-ninth year; while St. Jerome's Chronicle asserts that he lived to the age of 107. Accepting Diogenes' date, we may take it that he died about 285 b.c.; it is said that he complained that "we die just when we are beginning to live." His life must indeed have been a remarkably full and interesting one, when we consider that he enjoyed the personal friendship of two such men as Plato and Aristotle, and that he had witnessed the whole of the careers of Philip and Alexander of Macedon. To Alexander indeed he was directly indebted; the great conqueror had not been for nothing the pupil of the encyclopaedic Aristotle. He took with him to the East scientifically trained observers, the results of whose observations were at Theophrastus' disposal. Hence it is that his descriptions of plants are not limited to the flora of Greece and the Levant; to the reports of Alexander's followers he owed his accounts of such plants as the cotton-plant, banyan, pepper, cinnamon, myrrh and frankincense. It has been a subject of some controversy whence he derived his accounts of plants whose habitat was nearer home. Kirchner, in an able tract, combats the contention of Sprengel that his observations even of the Greek flora were not made at first hand. Now at this period the Peripatetic School must have been a very important educational institution; Diogenes says that under Theophrastus it numbered two thousand pupils. Moreover we may

fairly assume that Alexander, from his connexion with Aristotle, was interested in it, while we are told that at a later time Demetrius Phalereus assisted it financially. May we not hazard a guess that a number of the students were appropriately employed in the collection of facts and observations? The assumption that a number of 'travelling students' were so employed would at all events explain certain references in Theophrastus' botanical works. He says constantly 'The Macedonians say,' 'The men of Mount Ida say' and so forth. Now it seems hardly probable that he is quoting from written treatises by Macedonian or Idaean writers. It is at least a plausible suggestion that in such references he is referring to reports of the districts in question contributed by students of the school. In that case 'The Macedonians say' would mean 'This is what our representative was told in Macedonia.' It is further noticeable that the tense used is sometimes past, e.g. 'The men of Mount Ida said'; an obvious explanation of this is supplied by the above conjecture. It is even possible that in one place (3. 12. 4.) the name of one of these students has been preserved.

Theophrastus, like his master, was a very voluminous writer; Diogenes gives a list of 227 treatises from his pen, covering most topics of human interest, as Religion, Politics, Ethics, Education, Rhetoric, Mathematics, Astronomy, Logic, Meteorology and other natural sciences. His oratorical works enjoyed a high reputation in antiquity. Diogenes attributes to him ten works on Rhetoric, of which one *On Style* was known to Cicero, who adopted from it the classification of styles into the 'grand,' the 'plain,' and the 'intermediate.' Of one or two other lost works we have some knowledge. Thus the substance of an essay on Piety is preserved in Porphyry de *Abstinentia*. The principal works still extant are the nine books of the *Enquiry into Plants*, and the six books on the *Causes of Plants*; these seem to be complete. We have also considerable fragments of treatises entitled: — of *Sense-perception* and objects of Sense, of *Stones*, of *Fire*, of *Odours*, of *Winds*, of *Weather-Signs*, of *Weariness*, of *Dizziness*, of *Sweat*, *Metaphysics*, besides a number of unassigned excerpts. The style of these works, as of the botanical books, suggests that, as in the case of Aristotle, what we possess consists of notes for lectures or notes taken of lectures. There is no literary charm; the sentences are mostly compressed and highly elliptical, to the point sometimes of obscurity. It follows that translation, as with Aristotle, must be

to some extent paraphrase. The thirty sketches of 'Characters' ascribed to Theophrastus, which have found many imitators, and which are well known in this country through Sir R. Jebb's brilliant translation, stand on a quite different footing; the object of this curious and amusing work is discussed in Sir R. Jebb's Introduction and in the more recent edition of Edmonds and Austen. Well may Aristotle, as we are assured, have commended his pupil's diligence. It is said that, when he retired from the headship of the school, he handed it over to Theophrastus. We are further told that the latter was once prosecuted for impiety, but the attack failed; also that he was once banished from Athens for a year, it does not appear under what circumstances. He was considered an attractive and lively lecturer. Diogenes' sketch ends with the quotation of some sayings attributed to him, of which the most noteworthy are 'Nothing costs us so dear as the waste of time,' 'One had better trust an unbridled horse than an undigested harangue.' He was followed to his grave, which we may hope was, in accordance with his own wish, in some peaceful corner of the Lyceum garden, by a great assemblage of his fellow townsmen.

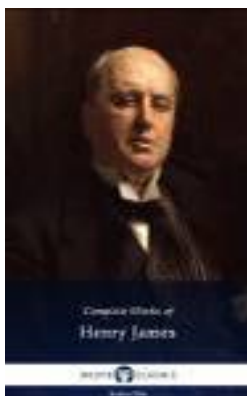
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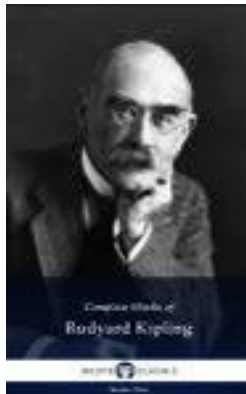
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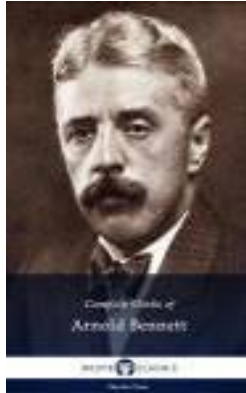
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Marion Crawford
Martin Luther
Penny Dreadfuls Collection
Sherwood Anderson
Thomas Dekker
Thomas Hobbes
Thomas Jefferson
Willa Cather
William Faulkner
William Le Queux



Ancient Classics

Achilles Tatius
Aeschines
Aeschylus
Ammianus Marcellinus
Apollodorus
Appian
Apuleius
Apollonius of Rhodes
Aristophanes
Aristotle
Arrian
Athenaeus
Augustine
Aulus Gellius
Bede
Callimachus
Cassius Dio
Cato
Catullus
Cicero
Claudian
Clement of Alexandria
Cornelius Nepos
Demosthenes
Dio Chrysostom
Diodorus Siculus
Dionysius of Halicarnassus
Diogenes Laërtius
Ennius

Epictetus
Euripides
Florus
Frontius
Fronto
Herodotus
Hesiod
Hippocrates
Homer
Horace
Isocrates
Josephus
Julian
Julius Caesar
Juvenal
Livy
Longus
Lucan
Lucian
Lucretius
Marcus Aurelius
Manetho
Martial
Nonnus
Ovid
Pausanias
Petronius
Pindar
Plato
Plautus
Pliny the Elder
Pliny the Younger
Plotinus
Plutarch
Polybius
Procopius
Propertius
Quintus Curtius Rufus
Quintus Smyrnaeus
Sallust
Sappho
Seneca the Younger

Delphi Poetry Anthology
Edgar Allan Poe (poetry)
Edmund Spenser
Edward Lear
Edward Thomas
Edwin Arlington Robinson
Ella Wheeler Wilcox
Elizabeth Barrett Browning
Emily Dickinson
Epic of Gilgamesh
Ezra Pound
Friedrich Schiller (English)
George Chapman
George Herbert
Gerard Manley Hopkins
Gertrude Stein
Hafez
Heinrich Heine
Henry Howard, Earl of Surrey
Henry Lawson
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James Russell Lowell
Johan Ludvig Runeberg
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Ludovico Ariosto
Luís de Camões
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Matthew Prior
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Robert Frost
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Rumi
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Sanskrit Epics
Sara Teasdale
Samuel Taylor Coleridge
Sir Philip Sidney
Sir Thomas Wyatt
Sir Walter Raleigh
Thomas Chatterton
Thomas Gray
Thomas Hardy (poetry)
Thomas Hood
Thomas Moore
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T. S. Eliot
W. B. Yeats
Walter Savage Landor
Walt Whitman
Wilfred Owen
William Blake
William Congreve
William Cowper
William Wordsworth



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Albrecht Dürer
Amedeo Modigliani
Artemisia Gentileschi
Berthe Morisot
Camille Pissarro
Canaletto
Caravaggio
Caspar David Friedrich
Claude Lorrain
Claude Monet
Correggio
Dante Gabriel Rossetti
Diego Velázquez
Donatello
Edgar Degas
Édouard Manet
Edvard Munch
El Greco
Eugène Delacroix
Francisco Goya
Giotto
Giovanni Bellini
Gustave Courbet
Gustav Klimt
Hieronymus Bosch
Jacques-Louis David
James Abbott McNeill Whistler
Jan van Eyck
J. M. W. Turner
Johannes Vermeer
John Constable
Leonardo da Vinci
Masaccio
Michelangelo
Paul Cézanne
Paul Gauguin
Paul Klee
Peter Paul Rubens
Pierre-Auguste Renoir
Pieter Bruegel the Elder

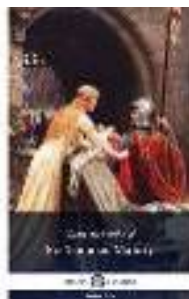
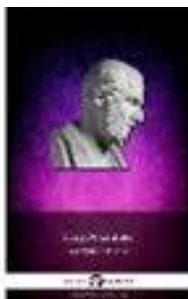
Piet Mondrian
Sandro Botticelli
Raphael
Rembrandt van Rijn
Thomas Gainsborough
Tintoretto
Titian
Vincent van Gogh
Wassily Kandinsky



Great Composers

Antonio Vivaldi
Antonín Dvořák
Franz Schubert
Frédéric Chopin
Giuseppe Verdi
Johann Sebastian Bach
Joseph Haydn
Ludwig van Beethoven
Piotr Illitch Tchaikovsky
Richard Wagner
Wolfgang Amadeus Mozart

Alphabetical List of Titles



A. E. Housman
A. E. W. Mason
Abraham Lincoln
Achilles Tatius
Adam Mickiewicz
Adam Smith
Aeschines
Aeschylus
Albrecht Dürer
Aldous Huxley
Alexander Pope
Alexander Pushkin
Alexandre Dumas (English)
Alfred, Lord Tennyson
Algernon Blackwood
Algernon Charles Swinburne
Ambrose Bierce
Amedeo Modigliani
Ammianus Marcellinus
Anatole France
Andrew Lang
Andrew Marvell
Ann Radcliffe
Anna Katharine Green
Anthony Hope
Anthony Trollope
Anton Chekhov
Antonín Dvořák
Antonio Vivaldi
Aphra Behn
Apollodorus
Apollonius of Rhodes
Appian
Apuleius

Aristophanes
Aristotle
Arnold Bennett
Arrian
Artemisia Gentileschi
Arthur Machen
Arthur Morrison
Arthur Schopenhauer
Athenaeus
August Strindberg
Augustine
Aulus Gellius
Baroness Emma Orczy
Baruch Spinoza
Beatrix Potter
Beaumont and Fletcher
Bede
Ben Jonson
Benjamin Disraeli
Beowulf
Berthe Morisot
Booth Tarkington
Bram Stoker
Bret Harte
C. S. Forester
C. S. Lewis
Callimachus
Camille Pissarro
Canaletto
Captain Frederick Marryat
Captain Mayne Reid
Caravaggio
Carolyn Wells
Caspar David Friedrich
Cassius Dio
Cato
Catullus
Charles and Mary Lamb
Charles Brockden Brown
Charles Darwin
Charles Dickens
Charles Kingsley

Charles Lever
Charles Reade
Charlotte M. Yonge
Charlotte Perkins Gilman
Charlotte Smith
Christina Rossetti
Christopher Marlowe
Cicero
Claude Lorrain
Claude Monet
Claudian
Clement of Alexandria
Confederation Poets
Confucius
Cornelius Nepos
Correggio
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D.H. Lawrence
Daniel Defoe
Dante Alighieri (English)
Dante Gabriel Rossetti
Dante Gabriel Rossetti
David Hume
Delphi Poetry Anthology
Demosthenes
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Diego Velázquez
Dio Chrysostom
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Dionysius of Halicarnassus
Donatello
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Epic of Gilgamesh
Epictetus
Erasmus
Ernest Bramah
Ernest Hemingway
Eugène Delacroix
Eugene Sue
Euripides
Evelyn Waugh
Ezra Pound
F. Scott Fitzgerald
Fergus Hume
Florus
Ford Madox Ford
Frances Burney
Frances Hodgson Burnett
Frances Trollope
Francis Bacon
Francisco Goya
Frank Norris
Frank R. Stockton

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Frédéric Chopin
Frederick Douglass
Friedrich Nietzsche
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Frontius
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Gertrude Stein
Gertrude Stein
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Giotto
Giovanni Bellini
Giovanni Boccaccio
Giuseppe Verdi
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Gustav Klimt
Gustave Courbet
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H. Rider Haggard
Hafez

Hall Caine
Hans Christian Andersen
Harriet Beecher Stowe
Heinrich Heine
Henrik Ibsen
Henry David Thoreau
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Henry Lawson
Henry Wadsworth Longfellow
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John Bunyan
John Clare
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John Donne
John Dryden
John Galsworthy
John Galt
John Gower
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John Kendrick Bangs
John Locke
John Milton
John Muir
John Ruskin
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Joseph Addison
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Maurice Leblanc
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Maxim Gorky
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Michel de Montaigne
Michelangelo
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Quintus Smyrnaeus
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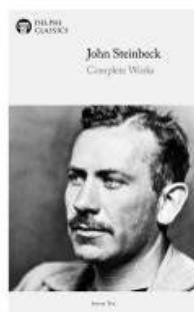
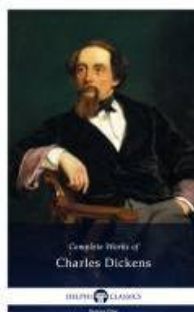
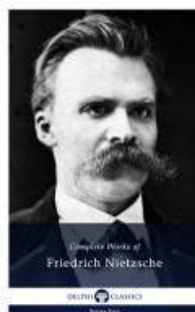
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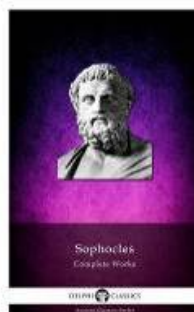
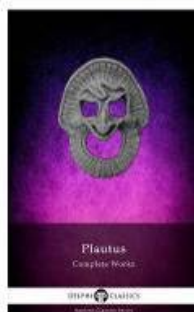
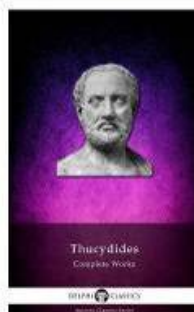
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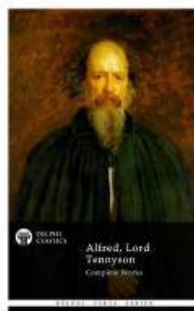
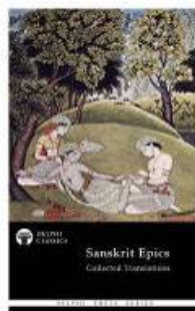
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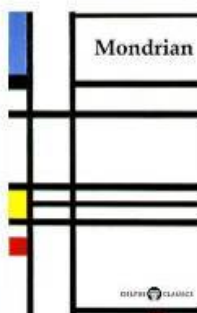
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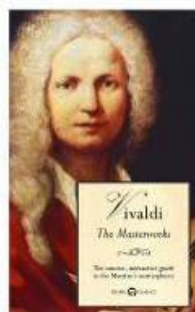
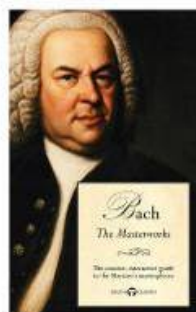
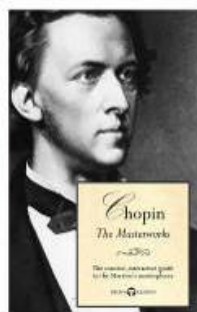
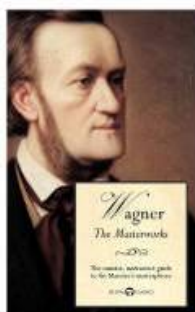
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